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ABSTRACT

A content analysis was conducted for all 60 programs of ThinkAbout, an instructional television series designed to strengthen the reasoning skills of fifth and sixth graders and to review and reinforce language arts, mathematics, and study skills. The study comprised separate analyses of three concerns: (1) demographic characteristics of individuals and groups represented; (2) the personal and social behaviors of the characters; and (3) the value-laden content of the programs. Data collection procedures included determination of thematic scene divisions and major characters and content analysis by pairs of raters. Demographic data indicated that the series was balanced across a number of variables. Analysis of personal and social behavior found that the series presents role models in which males and females, minority, and white characters exhibit systematic reasoning and persistence in problem-solving efforts. Characters teach and learn from one another, and prosocial values are upheld across a wide range of social and personal behaviors. The analysis of value-laden content, including value-laden social, personal, and educational values, showed that the most consistently evident values in the programs are the educational ones. A 24-item reference list is included. (LHM)

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ThinkAbout Content Analysis:



Final Report

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THINKABOUT CONTENT ANALYSIS:

FINAL REPORT

January 1982

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The Agency for Instructional Television is a nonprofit American-Canadian organization established in 1973 to strengthen education through television and other technologies. AIT develops joint program projects involving state and provincial agencies, and acquires and distributes a wide variety of television and related print materials for use as major learning resources. It makes many of the television materials available in audiovisual formats. AIT's predecessor organization, National Instructional Television, was founded in 1962. The AIT main offices are in Bloomington, Indiana.

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CHAPTER 1

THINKABOUT CONTENT ANALYSIS:

A PROFILE OF AN INSTRUCTIONAL TELEVISION SERIES

How can you ensure meeting your own expectations of a culturally and geographically representative instructional television series, stressing prosocial content during a two year production period that employs nearly 100 people, writers, designers, researchers and producers? When the series consists of sixty programs, each having a unique cast, storyline, and cultural setting, the challenge is great. Extraordinary measures are required to confirm that intended prosocial and instructional guidelines are implemented and that the expectations are satisfied.

Just such a situation was encountered with the production of ThinkAbout, an instructional television (ITV) series developed by the Agency for Instructional Television (AIT), as part of the Skills Essential to Learning Television Project. Guidance and funding were provided by a consortium of 35 state and provincial education agencies with additional support from the Corporation for Public Broadcasting and the Exxon Corporation.

Aimed at 5th and 6th graders, ThinkAbout is designed to strengthen reasoning skills and review and reinforce language arts, mathematics, and study skills. ThinkAbout's four major goals are to encourage and improve confident and flexible thinking, self-management, effective expression, and systematic reasoning. The series is also committed to positive role modelings, balanced representation, and the inclusion of prosocial content.

ThinkAbout is divided into "clusters," or groups of programs. Clusters present general thinking skills--classifying, giving and getting

meaning, sequencing, using criteria among them--skills that can be used when solving problems in school and out. Interspersed between clusters are two other kinds of programs--tips and challenges. Tips offer ideas to aid problem solving. Challenges are complex, thought-provoking problems intended to stimulate students' intellectual adrenalin. Each challenge program can be used to provide an indication of how students are progressing toward the goal of independent learning. Overall, Think-About programs offer students opportunities to improve their reasoning, study, mathematics, and language arts skills and to apply them repeatedly.

The need for a ThinkAbout content analysis arose early in the course of the project's development. The staff recognized the desirability of depicting thinking and reasoning processes in a context of universally appealing situations which foster the self-confidence and the self-respect of 5th and 6th grade students. A series of AIT-sponsored "think tanks" had stimulated consideration of a broad range of curriculum issues and student characteristics (Sloan, 1980). The project evaluation team, as well as the designers and writers, were challenged by the recognition of an inevitable "hidden curriculum" and of the need for periodic information about it during the production process. A new formative evaluation process was needed, and content analysis techniques offered a helpful method.

This report summarizes content analysis data collected on all 60 ThinkAbout programs. Three analyses were done to examine demographic characteristics, personal and social behaviors, and value-laden content. The final result is this profile of ThinkAbout content. It forms a backdrop against which other impact measures can be viewed. As with

other content analyses, this research forms one kind of bridge between the intents of the producer or communicator and the outcomes or effects of the communication on the audience (Carney, 1972). Many content analyses are forced to stand alone because the intentions of the communicator and effects of the communication are unknown. This report has the luxury of companions which describe both the intents¹ and the outcomes² of ThinkAbout.

Purpose of the Content Analysis

The intents of the ThinkAbout instructional design had been laid out early in the development process, including a commitment to positive role modeling and balance in representation for ethnic, sex and age groups. Carney (1972) related content analysis procedures to discerning the intent of a communicator. One of the purposes of the ThinkAbout content analysis was to monitor the congruity between the intended prosocial content and the actual content.

In addition to intended communication, the impact of television programs involves incidental, unintended communication. Unintended communication takes several forms. Gerbner (1974) asserted that life in a symbolic world, portrayed by the mass media, forms patterns which constitute a hidden curriculum:

The hidden curriculum is a lesson plan no one teaches but everyone learns....The most important thing to know is the nature and structure of the representations that most people will assume to be normal and inevitable (Gerbner, 1974, p. 476).

¹Skills Essential to Learning, Design Report #6, May, 1978.

²James R. Saunders and Subhash R. Sonnad, Research on the Introduction, Use, and Impact of the ThinkAbout Instructional Television Series (Bloomington, Ind.: Agency for Instructional Television, 1982).

Gerbner's concern was the stereotyped image of the teacher which exists in cultural representation. A second purpose of the ThinkAbout content analysis was to identify stereotypic content.

An overriding concern was that the formative content analysis should be proactive, not reactive; the system was designed to aid the development of high quality programs:

There is more to balance and representativeness than "not getting into trouble." For every negative criterion, there are positive ones! In addition to being concerned about being insensitive, how about using every opportunity to teach? But what to teach? We can teach children to expand their career choices by showing both sexes and all races in a variety of roles and occupations. We can show the elderly and the exceptional people of this world leading complete and fulfilling lives in relative normalcy. Perhaps we can have people buckle their seat belts every time they get into a car in order to foster improved safety habits. There is the potential for much incidental learning from television (Rockman, 1977).

A unique feature of the ThinkAbout content analysis derived from the need to provide information during, not after, the production process so that necessary changes could be made to assure that the intended and unintended educational impact would be as positive as possible. First, content analysis data would monitor the actual content in light of what had been expressly intended in the instructional design statements. Second, content analysis would assess the degree to which AIT policy mandates were fulfilled in the areas of the hidden curriculum: modeling prosocial values and individual differences, eliminating bias and stereotyping, and balancing various sex, ethnic, age, and socio-economic groups across the series of 60 programs.

The challenge to formative evaluation was to produce a content analysis system which would provide useful, timely information during the

production process. Traditionally, content analysis had been used to examine completed materials and resulted in a summative assessment. Several realities of the ThinkAbout production process precluded a traditional content analysis and required a flow content analysis information prior to completion of programs.

For example, the project development process extended from 1977 through 1980. During that period, many people, contingencies, and unanticipated events impinged on the instructional design. Development, evaluation, and production activities meshed in a complex fashion. The 60 programs comprising ThinkAbout were neither produced in sequence nor by only one production house. The influence of many people and multiple, simultaneous activities filtered and modified the original design. Program content had to be monitored prior to completion of the series in order to insure accurate and complete translation of ThinkAbout intents into ThinkAbout programs. While this report describes a profile in all 60 ThinkAbout programs, it is important to remember that the analysis was originally developed and conducted as part of an ongoing program of formative evaluation (Jochums, 1981).

The content analysis system was designed to be supplemental to other formative procedures. Although there was some overlap, different issues were central in the other formative procedures. Data from teachers and students provided the core of formative feedback on issues of comprehension, appeal, and perceived usefulness in the classroom. Such data were collected for scripts, rough-cuts³, and/or fine cuts on an individual

³ A rough-cut or fine cut is a substantially completed television program. While it closely approximates the finished product, some background music, special audio or video effects, superimposed titles, etc., may be missing. Rough-cuts are "rougher" than fine cuts!

program basis. The content analysis, on the other hand, responded to questions such as "What balance exists among the number of characters representing groups based on sex, age, ethnic or minority group membership? What values are perceived in the program? What role models are provided as a result of an accumulation of casting, scripting, and acting?"

Content analysis allowed the assessment of lessons as they were developed and the aggregation of the assessments across clusters and across the entire series. An in-house, formative procedure, the resulting data indicated the content of the lessons produced up to a given time. A later set of data resulted in a revised profile, changed by the inclusion of more recently produced programs. The diagram in Figure 1 provides a sense of the information flow involved. During production, four profiles were reported. (The fifth profile, which is reported in the following chapters, covers the entire series.)

Cumulative content analysis data affected the development process differently than did traditional formative evaluation data. The focus was not revision of the individual program in terms of either instructional objectives or production issues. Instead, the issue of balance over the series required the alteration of future programs on the basis of those already substantially completed. An analogy is that each completed program restricted the degrees of freedom for the next program.

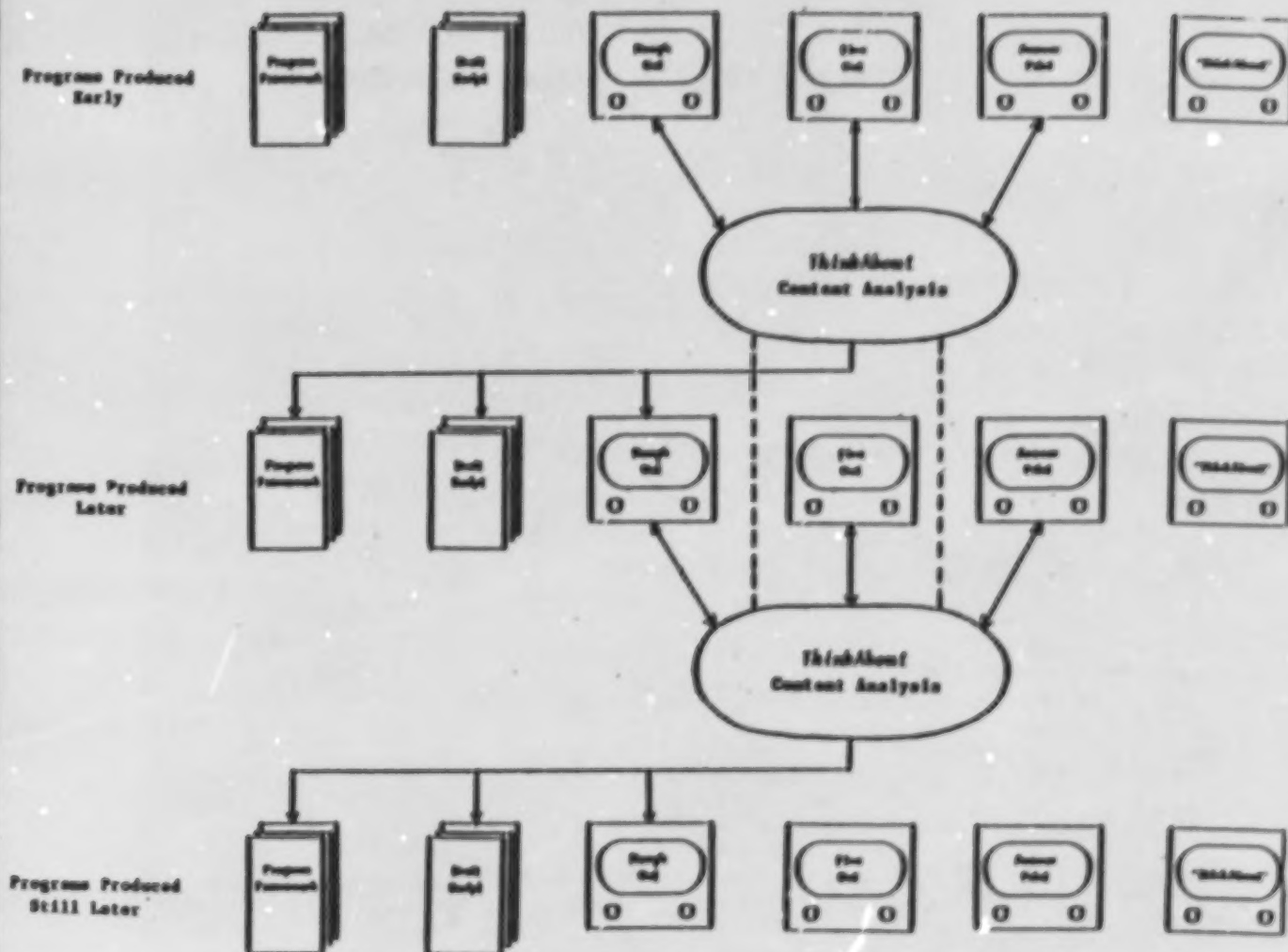


Figure 1. FLOW OF CONTENT ANALYSIS INFORMATION.

Development of Content Analysis Method

Issues in the creation of the ThinkAbout curriculum not only gave rise to a need for content analysis information but also created foci for the development of the instruments. The work reported here was a response to specific concerns about balance and representation of groups, role modeling, and the values subtly or directly communicated by the ThinkAbout programs. This work was related historically to concerns about the learning styles and cultural backgrounds of students in the ThinkAbout audience. In Thinking Through Television, the history of ThinkAbout's development, Sloan, (1980), characterized the emergence of multicultural concerns as both curricular and political.

In February 1977, the first multicultural meeting considered a "few key ideas that designers should consider as they set about developing program specifications" (p. 129). The key ideas were instructional guidelines to encourage students to extend what they already know, to use concrete vocabulary, and to stress the functional aspects of language.

In a background paper, Marcia Sheridan asserted that a profound impact of television on children occurred by providing models for behavior and criteria for evaluating themselves and others. Sheridan advocated portrayals of children and adults of "every race, age, sex, social class, and ethnic background." She also advocated activities which maintained the integrity of the various groups within the North American culture.

The second multicultural meeting occurred in May 1978, and covered political, pedagogical, and pragmatic issues. The aim was to develop

practical guidelines based on the prosocial premises articulated earlier in the project. By combining the negative goal of avoiding bias and the positive goal of creating sensitive, responsible materials, the steering committee prepared a set of Guidelines for Avoiding Biases and Stereotypes (Dawson and Gay, 1979). The guidelines were made available to staff, consortium representatives, script writers, and producers. Prior to 1978 the project staff made several attempts to develop questionnaires or rating forms which would track programs towards prosocial goals. They were found to be too global and/or subjective to provide the information necessary to influence casting decisions or the selection of situations and activities for scripting. The idea of a single instrument was discarded and a decision was made to develop several which could separate substantive issues from each other. (For a complete discussion of the development of the method, see Jochums, Neubert, and Rockman, 1979.)

The development of instruments moved through four stages: definition of concerns, determination of content analyses needed to accumulate data, the choice of issues within each instrument, and construction and revision of individual checklists.

Definition of the Areas of Concern

Concerns about insuring the prosocial nature of the programs, potential impact of the hidden curriculum, and congruity between intents and execution, were raised by a variety of people. The first task in development of the methodology was to review the extant internal documents. The review revealed that each time a single instrument had been attempted, the categories failed to be exhaustive

and mutually exclusive. While no previous single instrument had proven to be satisfactory, a review of them at least produced a lengthy list of concerns others had considered.

Discussions among evaluators, designers and consultants ensued in which the list of concerns was examined. As the project had progressed, new concerns arose; some others were resolved. The diversity of concerns was maintained, however, not simplifying the task for the research team.

Global statements of concern included pervasive, abstract questions: Are various cultural groups represented in the series-- women, men, minorities, various age groups, handicapped persons? Are such portrayals stereotypic and likely to communicate negative role models? What positive role modeling occurs? What values are communicated? Is multicultural diversity modeled without bias and/or stereotyping of characters? Is instructional content adequately recognizable? The content analysis had to take the abstract issues and attempt to translate them into an objective set of measures.

Some more concrete questions were also asked of the ThinkAbout content. Examples included the following: Do national or regional accents occur? Is cultural diversity represented by bilingual characters? What assurance is available that various geographical regions are represented? Are safe practices modeled for children in school, home, and recreational activities? Are girls and minority group representatives shown to be active or passive? Are all families traditional, two-parent nuclear families?

A sorting process resulted in five general categories of con-

cern: 1) demographic representation; 2) positive role-modeling; 3) stereotyping and bias; 4) value-laden content, and 5) instructional content. Since not all issues could be accommodated, the selection of issues within the categories remained to be done. Three kinds of resolution took place. A given issue might be included in the content analysis. A given issue might be excluded because the information could be acquired in another way; or, it might be excluded because another aspect of production obviated the need.

Examples of the two cases of exclusion may be helpful. Originally, all five of the above abstract concerns were included in the content analysis (see Jochums, Neubert, and Rockman, 1978). The instructional content analysis, however, was not completed. It duplicated other formative evaluation activities. Teacher review panels, classroom data, and student review panels provided ample information about the clarity and recognizability of instructional elements. One of the more concrete issues--the modeling of safe practices--was eliminated on the basis that consultant reviewers could monitor the scripts and rough-cuts in that regard.

The mode of production provided necessary balance in another aspect of content. Attention to national or regional accents was considered unnecessary because the eight production houses used in Think-About were themselves geographically distributed in the United States and Canada.⁴ The use of local actors would assure representation of

⁴Eight production studios were located in Alberta and Ontario, Canada, and in the states of California, Missouri, South Carolina, Texas, Virginia, and Utah.

various accents. Consequently, language issues were limited to the number of programs in which characters were bilingual and appropriateness of language style.

The final selection of demographic representation, positive role modeling, stereotyping, and value-laden content concerns can be attributed to two factors. First, great salience was ascribed the issues by the design staff, consortium members, and consultants serving as members of "think tank" panels and/or steering committees. Second, precedents in the research literature supported the viability of research in each area. The next task was to determine what content analysis instruments were needed to make the research operational.

Determining Instruments Needed

Role modeling, stereotyping, and balance concerns obviously overlapped with each other and with values. Values over-arched all of them and presented particular difficulty because of their abstraction, subjectivity, and pervasiveness. Developing the instruments meant confronting the technical aspects of content analysis full-face. Technical factors prompted the development of three instruments, or checklists.

Demographic balance and representation was considered appropriate for a discrete content analysis instrument. The overall purpose of the demographic content analysis was to monitor the types of characters and surface features represented in ThinkAbout programs. Surface features included nine categories of diverse characteristics (e.g., presence of absence of voice-overs, sex of voice-overs, socioeconomic levels and family structures depicted, topographical features, etc.)

Date in the form of frequencies and percentages were required. Berelson (1952) had insisted that content analysis should deal with denotative materials, not relatively connotative materials. The tally of the number of male and female characters or the number of urban vs. rural environments could be tabulated with a fair degree of reliability.

Role modeling and stereotyping issues, however, tend to require abstract judgments on the part of judges. The second instrument would record the personal and social behavior exhibited by ThinkAbout role models and would complement the demographic analysis. While demographic information about balance and representation was important, alone it would result in little more than a "head count." Assuring the satisfaction of AIT policy for positive portrayals required more information about how the characters interacted with each other and the personal characteristics they possessed. For example, both females and ethnic groups might be represented, but a representation in which they are always passive followers could not be considered a positive portrayal of either group.

The analysis of value-laden content clearly required a specific instrument. Because values are abstractions, they could not be rated in the same way as either males and females or active vs. passive behaviors. Value-laden communications are pervasive, not assignable to a specific character or event in a program. Equality of sex, for example, is partly communicated by the presence of both females and males; it is partly communicated by their equal opportunity and ability to be active characters. Yet, the value-laden communication is more. The nuances of their interactions and the reactions of other

characters form part of the communication, likewise, their success or failure and accommodation to their "fates" all become part of the value-laden message. The program script, actors, and directors all contribute to the holistic impression that the sexes are treated with equality.

More technical issues had to be resolved.⁵ The entire Think-About series of 60 programs (15 hours of instruction) was considered the universe of source content. In other words, rather than taking time samples or program samples, all of the programs and every minute in them would be analyzed. This decision seemed to be a necessity since the data were to be used for formative evaluation purposes.

The context unit, or the largest unit examined for recording data, was not so simple to define. For the demographic analysis, the two types of data collected (information about characters and information about surface features) allowed the use of the entire program as the context unit. For both values and personal and social characteristics, however, the context unit was a pragmatically defined "thematic scene." For the ThinkAbout analysis, the thematic scene was defined in a dramatic sense as the playing out of a complete thought or motivation rather than a precisely time-limited (e.g., two-minute) segment. This unit allowed enough action for the evaluator to receive a coherent message yet was short enough to insure that most of the content was attended to. Each program was divided into five thematic

⁵For the most part, Carney's (1972) terms have been used in the following discussion. Carney's term "context unit" includes two units (physical and syntactical) more recently defined by Krippendorff (1980). Carney's "category" corresponds to one type of Krippendorff's "variables."

scenes, each approximately three minutes in length.

Division of the program into thematic scenes was necessary for the personal and social characteristics analysis because while a character might be very physically active in one part of the program, he/she might be passive in another. To use either incident to depict the whole program would have been unfair. Similarly, in the value-laden content analysis, respect for authority could be identified in one segment while assertiveness might occur in another scene. Furthermore, lack of respect for authority might appear early in a program while respect for the same authority might be identified before the program ended as the story resolved the situation.

The definition of recording units and categories varied from instrument to instrument. For the demographic analysis, two recording units were used: a two-dimensional matrix of characters by demographic traits and dichotomous measures of presence or absence of a given surface feature. In the personal and social analysis, the presence or absence of behaviors was recorded for individual major characters. In the analysis of value-laden content, each of the values was judged to be present or absent in a given thematic scene. (A second recording unit noted whether the value-laden content was judged to be acceptable or problematic.)

Data Collection Procedures

With multiple instruments established, some contingencies for data collection were also established. Each program would have to be screened

more than once. A number of teachers would be necessary to collect all the data.⁶

A panel of twelve teachers was established. Six were trained for the demographic and personal and social analyses and six were trained for the instructional content and value-laden content analysis. Occasionally, as a panel member dropped out, a new teacher was trained individually.

Several had taught intermediate grade classes during the previous year. All raters had classroom teaching experience, and, as a group, their experiences spanned the kindergarten to grade eight spectrum. All but one teacher used instructional television regularly.

⁶With the decision to hire a panel of local teachers, the ThinkAbout project officer raised a validity issue by questioning the representativeness of the panel. All teachers from a local community, could these raters represent the wide range of teachers and cultural groups for which ThinkAbout is intended? For some time, consideration was given to using multiple panels, but the additional commitments necessary were prohibitive. Multiple panels would have increased costs, required multiple data analyses, and required additional reporting. Projected costs escalated, both in money and staff time.

Limitations on the data were examined prior to the decision to maintain a single, local panel of content analysts. In light of what is known about the data, we can say that:

1. The original panel of teachers were consistent with each other by the end of their training sessions.
2. Teachers added to the panel, as others left, were consistent with the original reliability data after similar training procedures.
3. The panel represented a wide range of teaching experiences with the fifth and sixth grade population.

We do not know, however, the similarity of their judgments to teachers from widely varying background (e.g., inner-city schools, differing ethnic backgrounds).

Training and data collection began in June 1979, and ran through the end of the production phase. Training consisted of three sessions, totalling about ten hours. Evaluators introduced the project and content analysis activity. Practice sessions used a program from AIT's bread & butterflies series. After viewing the program in its entirety, scenes were viewed individually and group consensus reached. The group was then broken down into random pairs. After the definitions of terms and instructions were well understood, the inter-rater reliability was established using four ThinkAbout programs. (See Chapters 2, 3, and 4 for the reliability results of each analysis.)

Once training and reliability sessions were completed, teacher raters from each panel were assigned to work in rotating pairs. To prevent possible rater bias, pairing arrangements were checked periodically to insure that no two raters worked together consistently.

The data collection procedure included four steps for each program:

1. An AIT staff evaluator determined thematic scene divisions and major characters.
2. Pairs of raters were contacted for each analysis.
3. Raters viewed and analyzed the program.
4. Completed ratings were coded for data processing by the evaluation staff.

Four formative reports were issued for each analysis. When to report the data for groups of programs was a pragmatic decision. Eleven rough-cuts were available when the data collection began, and

the first round of reports covered those 11 programs. Content analysis had to play catch-up to the production time-line. The content analysis caught up at the 21-program mark. The addition of ten programs to the first group of 11, had resulted in noticeable shifts. Such shifts would not have been so apparent if each additional program had been reported separately. Because data processing was elaborate, expensive, and time-consuming, subsequent content analysis reports were made for 30, 45, and 60 programs.

The next three chapters detail the final results of each component of the content analysis. Chapter 2 reports the demographic data and is followed by the report of personal and social behavior (Chapter 3). The analysis of value-laden content is reported in Chapter 4. Finally, Chapter 5 discusses the implications of the work.

CHAPTER 2

A PROFILE OF THINKABOUT DEMOGRAPHIC CHARACTERISTICS

The content analysis of demographic characteristics of the Think-About series was of particular importance to the project staff. AIT policy statements advocate the balance and representation of various societal groups in instructional materials. The consortium process, with its periodic meetings, functions as an accountability review on decisions about program development. In addition, this aspect of the content analysis had predecessors in the research literature.

For example, the 1978 California Guidelines for Evaluation of Instructional Materials, focused on social content and required balance within each sex for traditional and nontraditional activities. Barcus (1975) demonstrated that in commercials during weekend broadcasts, spokespersons were adults, 90% of the time, and male, 72% of the time. Of the children represented, males outnumbered females two to one. Verna (1975) found that females dominated 14% of the commercials analyzed while males dominated over 50%.

Greenberg, Simmons, Hogan, and Atkin (1980) reviewed previous television research and reported their content analysis of commercial television drama's fictional population in three seasons. Males outnumbered females, three to one. Blacks constituted about 10% of the characters tabulated. Young (12 years and younger) and older adults (50 years plus) were under-represented in comparison to national census figures.

Concern with demographic information has not been limited to commercial television research. The Report of the Task Force on Minorities in Public Broadcasting (A Formula for Change, 1978) includ-

ed content analyses of both adult and children's programming.

For general adult programming, males outnumbered females more than two to one (males, 72%; females, 28%). Minority ethnic groups comprised 13.4% of the characters in adults general programming but only 10.5% of the characters in dramatic programming.

In children's programming, females comprised about 35% of the characters; males constituted 59% of the group, and the remaining characters (6.1%) were considered no sex or other category (puppets and animals). About one-fourth of the characters could not be coded as belonging to a specific ethnic minority group, but whites made up 37%, Asians, 4%, Hispanics, 13%, blacks, 19.5%, and 1.4% were in an "other" category. The most commonly identified age groups were child-adolescent (46%) and settled adult (29%). Young adults comprised 9.3% of the characters, and the elderly were represented by 1% of the characters.

Since the inception of this analysis, a great deal of research has been published. This demographic analysis is new data in a continuing stream of research on TV presentations. Its unique contribution is the focus on a single series, developed specifically for in-school use. Furthermore, the analysis is comprehensive rather than using samples of programs, time-samples within programs, or character samples.

The overall purpose of the demographic content analysis was to monitor the types of characters and surface features (e.g., voice-overs, family structures) represented in ThinkAbout programs. The resulting data indicate the degree of representation and balance

of various characteristics (e.g., sex, age, ethnicity). Unique aspects of development of the instruments and procedures are summarized below.

Instrument Development

Two major types of demographic information were important to the project--information about the characters portrayed in the programs and information about a group of diverse program characteristics, tagged with the term, "surface features." One unifying feature was that both types of data allowed the use of the entire program as the context unit. Recording units were individual major characters, the constellation of minor characters, and crowds. Coding categories for both persons and surface features were selected from AIT staff and ThinkAbout consortium concerns (Table 1).

Two assumptions guided the choice of recording units. The first assumption was that most of the educational impact was communicated via a few major characters in each ThinkAbout program. The design staff had urged writers to develop a few characters well for the brief (14.5 minute) drama rather than including many less well-drawn roles. A few individuals, usually target-agers, encountered a problem-solving situation and discovered their need for ThinkAbout skills. (Consequently, only major characters were assessed individually in the demographic analysis.) Up to eight major characters were allowed for analysis, a number seldom achieved (see below).

Table 1

Coding Categories for Demographic
Characteristics Checklist

RELATED TO CHARACTERS			
<u>Sex</u>	<u>Age Group</u>	<u>Ethnic Groups</u>	<u>Apparent Exceptionalities</u>
Male	Younger than target age	Asian	Educationally related
Female	Target age	Black	Physically handicapped
	Teenager	Hispanic	Behavioral/Social
	Adult	Native American/	Other Unique characteristics
	Senior Citizen	Native Canadian	
		White	
		White Ethnic	
		Other or Indeterminate	
RELATED TO SURFACE FEATURES			
<u>Trace Over</u>	<u>Site of Activities</u>	<u>Population Density</u>	
Occurrence	Home	Rural	
No occurrence	Indoors	Small town	
	Outdoors	Urban-low density	
Sex	School	Urban-high density	
Male	Indoors, Classroom	Indeterminate/	
Female	Indoors, other than classroom	can't tell	
	Outdoors, at school building, complex, athletic field, etc.		
<u>Socioeconomic Level</u>	Public locations		
Upper middle class	Indoors		
Middle class	Outdoors		
Working class			
Lower			
Indeterminate/ can't tell			
<u>Family Structure</u>	<u>Spoken Language</u>	<u>Topography</u>	
<u>Evidence</u>	English speaking characters only	Rocky Coast (e.g., Maritimes, Northeastern U.S.A.)	
Nuclear family, two parents	Bilingual characters evident	Sandy Coast (e.g., South Carolina, Southern Carolina, Gulf of Mexico)	
Nuclear family, one parent	Some characters speak only language other than English	Tropical (e.g., Florida, Southern California, Houston)	
Extended family		Great Plains (e.g., Saskatchewan, The Dakotas, Kansas)	
Single adult		Desert (e.g., Southwestern U.S.A.)	
None (entire program done in school, etc.)	<u>Climate</u>	Rolling Plains (e.g., Ontario, Illinois, Indiana, Ohio)	
<u>Facile Size</u>	Rain	Mountains (e.g., Canadian and American Rockies, Appalachians)	
Small	Snow	Other (e.g., forest, beaches, which don't clearly fit categories above)	
Medium	Clear	Indeterminate/all scenes urban, indoors	
Large	Other		
	Indeterminate/ can't tell		

The second assumption was that minor characters and crowd scenes create an "impression" which contributes to overall educational impact. Considering physical movement of the characters, actions of the camera to cover a crowd, and momentary participation by minor characters, precise configurations cannot be communicated without a frame-by-frame count. Minor characters and crowds appear as a backdrop to major actions and characters. The impact is likely to be that a crowd includes a variety of people or that a basketball team includes a variety of demographic groups. The methodological accommodation to this assumption was to have raters check as many demographic categories as appeared to be present in the minor character constellations or crowds. Theoretically, with a large number of minor characters, every demographic category could have been present in a given program.

Other researchers have resolved the issue of how many characters can sensibly be analyzed in other ways. Greenberg, et al. (1980) selected only characters who had speaking parts. The Media Action Research Center (1974) used brief time samples of programs, counting the characters in the time samples.

Surface features were viewed as characteristics which might increase, but not guarantee, the universal appeal of the programs. A few, like climates, were a matter of curiosity more than a significant policy issue with the staff. In most cases, more than one coding category for a given surface feature could be checked by the teacher-raters. For example, in a few programs more than one socioeconomic level was depicted; in almost all programs multiple sites for activity occurred.

Inter-rater Reliability

After the instrument was developed, the panel of six raters completed ratings on four ThinkAbout programs. The data was analyzed using percentages-of-agreement averaged across randomly-paired judges to determine inter-rater reliability.

The total number of possible agreements was computed by tallying within categories for each character-related classification unit. In some categories, (e.g., sex) only one alternative could be marked; consequently, the category as a whole was considered one agreement or disagreement. In the Apparent Exceptionality category, a character could theoretically represent more than one exceptionality; in that case, four possible agreements were tallied for the overall category.

The agreements among raters were quite high. Table 2 shows the program titles in the order analyzed by the panel. Over the four programs and random pairs of the six raters, reliability of the instrument ranged from 83.48% to 96.35%. After the first program, percentages were consistently above 90%.

Late in the production process, reliability checks on new panel members resulted in levels of agreement similar to the original reliability data.

Table 2
Inter-rater Reliability of the Content Analysis of
Demographic Characteristics and Surface Features

Series #	Title	Number of Raters	Total # Possible Agreements	Range % Agreement	Average % Agreement
53	Making Your Point	6	109	83.48 - 88.99	85.32
8	Find Your Guide	6	137	93.43 - 96.35	95.38
24	People Patterns	6	130	93.07 - 96.15	94.37
16	What Do I Know?	6	123	90.25 - 95.93	92.41
Average		6	124.75	83.48 - 96.35	91.99

RESULTS

Major Characters

Major characters are discussed first, followed by minor character constellations, crowds, and the surface features. Contrasts with other content analyses and the relationship of these data with national population statistics for the United States are noted in the text. Both total population statistics from 1970 and school-age statistics from 1977 are cited. The 1980 census data was not available during the production process.

The data are based on 216 major characters identified in the 60 ThinkAbout programs. An average of 3.6 major characters per program was consistent with the ThinkAbout Script Writer's Guide (1979) which urged simple, straightforward storylines with few major actors. The demographic

characteristics of all major characters are provided in Table 3.

Table 3

Demographic Characteristics of Major Characters in Sixty Programs*

Characteristics	%	Number of Characters
Sex		
Male	51.4	111
Female	48.6	105
Age		
Younger than target-age	2.3	5
Target-age	37.4	124
Teenage	11.1	24
Adult	25.9	36
Senior Citizen	3.2	7
Ethnic Group		
Asian	3.7	8
Black	14.4	31
Hispanic	1.4	3
Native American/Canadian	1.4	3
White	76.9	166
White Ethnic	1.9	4
Other/Can't Tell	.5	1
Apparent Exceptionalities		
Educational	1.4	3
Physically Handicapped	3.7	8
Behavioral-Social	12.0	26
Other	0.0	0
None Apparent	82.9	179

* The tabulations represent a total of 216 major characters.

Sex of Major Characters

The final distribution of 216 characters is 111 males (51.4%) and 105 females (48.6%). These data on sex are quite close to the national census figures for 1970 which indicated that 51% of the population were females and 49% were males.

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ThinkAbout major character males slightly outnumbered females, which is, of course, the reverse of national norms in which females slightly outnumbered males. However, comparing the ThinkAbout data with commercial television drama, suggested an impressive success in obtaining balance across the series. Greenberg et al. (1980) reported that for three years (1975-78) males outnumbered females three to one when speaking characters were tabulated in seven types of commercial television dramas. The point of ThinkAbout's greatest imbalance occurred when the first eleven programs were content analyzed (57% male, 43% female). Even the least balanced content analysis report was far closer to equal representation than commercial television has been able, or willing, to attain. Early formative content analysis data indicated the project's commitment to a balanced cast of characters.

The series provided a variety of casts; producers did not simply cast every other character as female or male. Twenty-one programs contained equal numbers of major character males and females. Eight included a majority of females, and eleven included a majority of males. Ten each had either all female or all male major characters.

Age Groups--Major Characters

Target-agers (10-12 years) represented over half the major characters in the series. The distribution of characters among age groups was almost the same for all five demographic analyses. The adult and teenage categories included about 37% of the characters, and the remaining 5% were young children or senior citizens.

While the profile percentages do not reflect national population percentages, they clearly indicate two things. First, all age groups

were represented in the series and second, the large numbers of target-age characters allow ample opportunity for students in the viewing audience to find characters with whom they could identify.

The relationship of sex to age (Table 4) demonstrates that both females and males occurred in every age group. Males outnumbered females in all groups except target-age (10-12 years).

Table 4

Crosstabulations of Major Characters by Sex and Age Group for Sixty ThinkAbout Programs*

	Younger Than Target-Age	Target-Age	Teenager	Adult	Senior Citizen	Row Total
Male	4 (1.9)	56 (25.9)	14 (6.5)	33 (15.3)	4 (1.9)	111 (51.4)
Female	1 (0.5)	68 (31.5)	10 (4.6)	23 (10.6)	3 (1.4)	105 (40.6)
Column	5 (2.3)	124 (57.4)	24 (11.1)	56 (25.9)	7 (3.2)	216 (100.0)

* Cell entries are frequencies with percentages in parentheses.

Ethnic Groups—Major Characters

All ethnic groups were represented in the series. From the first formative content analysis report through the final profile of 60 programs, the proportional representation has changed slightly. Across all 60 programs, minority groups were represented by 23.3% of the major characters (N=50). More than half the minority major characters were black.

Comparing ThinkAbout ethnic demographics to population norms was done in several ways; each suggested that the major character population

closely approximated the U.S.A. census distribution. Greenburg (1980) cited population percentages of 89% white and 10% black. Other sources were quite similar with 87.5% white, 12.5% minority (Census, 1970). Comparing ThinkAbout to these national figures available at the beginning of production, whites were somewhat under-represented in ThinkAbout and blacks over-represented.

However, when 1977 minority school enrollment demographics were considered, blacks were slightly under-represented. In 1977, 15.5% of the school enrollment were black students, 1.2% Asian, and 6.4% Hispanic. Using these comparison figures, ThinkAbout over-represented the Asian minority and under-represented the Hispanic minority. The total minority group (23.3%), however, is within two-tenths of one percent of the combined minority school groups (23.1%).

Taking a program-by-program perspective, 26 ThinkAbout programs included major characters from more than one ethnic group category. Thirty programs included only white major characters. Four included only minority group representatives cast in major roles.

The relationship between the sex of major character and his/her ethnic group is displayed in Table 5. Each ethnic group included both males and females. Females were more frequent in the Asian, Hispanic, and Native American/Canadian categories, while males were more common in the others.

Table 5
Crosstabulation of Major Characters in All Programs
by Sex and Ethnic Groups*

	Asian	Black	Hispanic	Native/American Canadian	White	White Ethnic	Indeterminate	Raw Total
Male	2 (1.8)	17 (15.3)	1 (.9)	1 (.9)	86 (77.5)	3 (2.7)	1 (.0)	111 (51.4)
Female	6 (5.7)	14 (13.3)	2 (1.9)	2 (1.9)	80 (76.2)	1 (1.0)	0 (.0)	105 (48.6)
Column Total	8 (3.7)	31 (14.4)	3 (1.4)	3 (1.4)	166 (76.9)	4 (1.9)	1 (.5)	216 (100.0)

* Cell entries are frequencies with percentages in parentheses.

Visible Exceptionalities--Major Characters

Visible (apparent) exceptionalities were represented in 25 ThinkAbout programs. The most frequent category was behavioral/social exceptionalities. Raters identified a number of characters having exceptional talent, social ability, intelligence, and/or maturity. For example, three target-aged girls were figure skaters and each took a different approach to planning her performance (Program 23). Kathleen emphasized research; Leah favored experimenting in her practice sessions; and Heather relied on observation and inspiration. These talents were positive exceptionalities.

Several characters were identified who had noticeable characteristics which might have been important socially. The characteristics included being overweight, wearing glasses or braces, having accents, and having an obvious birthmark. A few characters were considered exceptional for multiple reasons; and one, for a clearly negative reason--she was judged to be "very prejudiced and jealous."

The physical category included 3.7% (N=8) of the major characters. In most cases, a handicap was clearly indicated by the raters. Examples

included a gymnast who had a leg brace, several characters who were hard of hearing or deaf, and two who were wheelchair-bound.

Only three characters were considered educational exceptionalities. The small group included two scientists and a writer.

While about 17% of the characters were considered exceptional, almost 83% (N=179) were not identified as exceptional. During program production, concerns had surfaced about ThinkAbout characters being "super kids." The content analysis allays those fears in that 83% of the major roles depicted "ordinary people."

Minor Characters and Crowd Scenes

Programs were analyzed for the impressions of various demographic characteristics in minor character constellations or crowd scenes. The percentages reported are not percentages of characters, but percentages of programs. Some programs may not include either minor characters or crowds, so what is appropriate across the series is subject to varying interpretations.

Table 6
Demographic Characteristics of Minor Characters
and Crowds in Sixty Programs

Characteristics	Minor Characters		Crowds	
	Percentage of Programs	Number of Programs	Percentage of Programs	Number of Programs
Sex				
Male	78.3	47	65.0	39
Female	73.3	44	61.7	37
Age				
Younger than tar-				
get-age	5.0	3	11.7	7
Target-age	43.3	26	56.7	34
Teenage	25.0	15	26.7	16
Adult	65.0	39	50.0	30
Senior Citizen	16.7	10	10.0	6
Ethnic Group				
Asian	11.7	7	15.0	9
Black	35.0	21	38.3	23
Hispanic	6.7	4	8.3	5
Native American/ Canadian	3.3	2	1.7	1
White	76.7	46	65.0	39
White Ethnic	11.7	7	1.7	1
Other/Can't Tell	1.7	1	8.3	5
Apparent Exception-				
alities				
Educational	0.0	0	0.0	0
Physically Handi-				
capped	3.3	2	1.7	1
Behavior/Social	1.7	1	0.0	0
Other	6.7	4	3.3	2

The demographic profile of minor characters and crowd scenes is presented in Table 6. The interpretation of the data differs from the major character data. Impressions of the representation of males and females were almost balanced for both minor characters and crowds. That is, in 78% of the programs, males were evident in minor character groups, and in 73% of the programs, females were evident.

The adult age group was the most frequently evident in minor character constellations. Sixty-five percent of the programs (N=39) in-

cluded adult minor characters and half included adults in crowds. Target-aged minor characters and crowd members were clearly evident in about half or more of the programs. Teenagers were represented in about one-fourth of the programs, and the two extreme age groups were less often apparent.

The adult age group was most frequently evident in minor character constellations. Target-agers were most evident in crowds.

All ethnic groups were judged to be represented in both minor character constellations and crowd scenes. Whites were present in about three-fourths of the minor character constellations (46 programs). Blacks was the minority group found in the most programs (35%) as part of the minor character constellations. Although crowds did not appear in all programs, the two most frequently present groups were whites and blacks.

Surface Features

Surface features were considered to be elements which might foster student identification and contribute to the universality and program appeal. The wide-ranging surface features are summarized in Table 7.

Voice-overs were present in 39 of the programs (65%). In sharp contrast to Verna's (1975) work on commercial TV advertising, female voice-overs occurred in more than half of the 39 programs. (Both sexes were represented in 13 of the 39 programs.)

Table 7
Percentages/Frequencies of Programs in
Which Surface Features Occur

VOICE OVER	I	N	SEX OF VOICE OVER	I	N	SPOKEN LANGUAGE	I	N
Occurrence	63.0	39	Male	25.0	15	English only	91.7	55
No occurrence	35.0	21	Female	18.3	11	Bilingual characters	5.0	3
			Both	21.7	13	Other than English only	3.3	2
			Not Applicable	35.0	21			
POPULATION DENSITY	I	N	CLIMATE	I	N	FAMILY STRUCTURES AND SIZE	I	N
Rural	15.0	9	Rain	6.7	4	Nuclear, 2 parent	28.3	17
Small Town	13.3	8	Snow	1.7	1	Nuclear, 1 parent	31.7	19
Urban, low density	28.3	17	Clear	91.7	55	Extended family	5.0	3
Urban, high density	16.7	10	Indeterminate	8.3	5	Single adult	3.3	2
Indeterminate	35.0	21				No families evident	38.3	23
SOCIOECONOMIC LEVELS	I	N	SITE OF ACTIVITIES	I	N	TOPOGRAPHY	I	N
Upper middle	6.7	4	Home	75.0	45	Rocky coast	1.7	1
Middle	80.0	48	Indoors	75.0	45	Sandy coast	3.3	2
Working Class	15.0	9	Outdoors	38.3	23	Tropical	5.0	3
Lower	1.7	1	School			Desert	5.0	3
Indeterminate	6.7	4	Classroom	35.0	21	Great plains	0.0	0
			Indoors, other	33.3	20	Rolling plains	13.3	8
			Outdoors	21.7	13	Mountains	5.0	3
			Public locations			Other	23.3	14
			Indoors	60.0	36	Indeterminate	56.7	34
			Outdoors	81.7	49			

* Some categories total to more than 100% because more than one subcategory might occur in a given program.

The family types most often noted were small two-parent nuclear and small one-parent nuclear. Two single adult households were noted in the series, and three extended families added to the array of family structures. No families were evident in 23 programs (38.3%).

The middle class was most often portrayed, followed consecutively by the working, upper middle, and lower classes. In four programs (6.7%) no socioeconomic level was determinable, suggesting the possibility that a variety of students could identify with the presentation.

With respect to population density, the programs which could be rated (49 out of the 60) were rather well-distributed across four categories. The two Urban categories (Low Density and High Density) were most frequent in occurrence. Slightly less than 30% of the programs (N=17) were Urban, low density; and 16.7% (N=10 programs) were judged to depict high density urban situations.

Most of the series (91.7%; 55 programs) includes a totally English-speaking cast. Three programs included bilingual characters or who spoke only a foreign language.

In ThinkAbout, the sky was generally clear (55 programs; 91.7%) for obvious production reasons. However, it did rain briefly in four programs and snowed once. Five of the programs (8.3%) were indeterminate with respect to weather conditions.

Topography was considered another program characteristic which could help, or hinder, student identification with the series. For a majority of programs (34; 56.7%) the topography was indeterminate, suggesting that the events could have occurred anywhere. Rolling plains were most commonly identifiable. Mountains, deserts, and tropical features were sprinkled across the series and coastlines were also evident in a few programs.

The emphasis on real-life situations was evident in the locations of the activities. Most programs included more than one location, the two most common of which were outdoor public locations (49 programs; 81.9%) and indoor home situations (45 programs; 75%). Classroom and indoor school locations were about equally common with outdoor home locations; each of the three sites were evident in about one-third of the series. About 20% of the programs included outdoor school sites.

Summary

The profile of ThinkAbout demographic characteristics is closely related to previous research in the analysis of television content. For the purposes of tracking the ThinkAbout content and providing information to the production process, two kinds of demographic information were collected: information about characters and information about a variety of program characteristics dubbed "surface features". Fourteen categories were constructed with 59 sub-categories for coding data on such issues as balance of sex, age, ethnic/minority groups, representation of exceptional persons, the type of community, family structure, and topography illustrated in the programs. After construction of the instrument, inter-rater reliability was assessed and found to be acceptable.

The demographic content analysis made clear that the ThinkAbout series met the expectations of the consortium and staff for balance across a number of variables. The series was particularly strong in its representation of sex and ethnic groups. All age groups were represented in ThinkAbout. ThinkAbout also included major characters who struggled with a variety of exceptional characteristics. Even in minor character constellations and crowd scenes, a well-balanced world of sex, age, and ethnic groups was depicted. The ThinkAbout content analysis demonstrated that instructional television programming can accomplish the representation considered important by educators and the society as a whole. The contrast with the content analyses of both commercial and public television programs is striking, particularly in the representation of females and the black ethnic group. The ThinkAbout world included far more realistic percentages of females and blacks than the other two types of programming.

CHAPTER 3

VALUE-LADEN CONTENT IN THINKABOUT PROGRAMS

The ThinkAbout value-laden content analysis was an effort to summarize the world-view of ThinkAbout characters and to describe the prosocial content of ThinkAbout from the perspective of belief systems implied by the programs. In addition, the content analysis was able to identify content which might portray unintended value statements.

The fundamental premise underlying the value-laden content analysis was that the ThinkAbout staff needed to know if the series were fulfilling AIT's commitment to the production of prosocial content in its instructional programs. ThinkAbout was committed to the overall goals of the Skills Essential to Learning project, for example, "the promotion of certain societal goals, such as the strengthening of inter-group understanding" (Evaluative Criteria, SEL II Handbook).

As early as 1975, the project had been committed to depicting the learner as an active participant in real-life situations. Since instruction was to be communicated in vivo, and since life-like decisions and activities inevitably butt up against values, this orientation necessitated the consideration of values communicated. In a working document, affectionately dubbed "Papa Bear," AIT had stated its seven intentions for ThinkAbout and all Skills Essential to Learning series; one intention was that AIT-produced materials would reflect the belief that "values are an integral part of learning" (The Essential Skills Television Project, 1975).

The staff recognized that differences in values exist among cultural/ethnic groups, generations, regions, and socioeconomic groups. To what

extent these differences were represented in the ThinkAbout audience of teachers and students was unknown, but differences were assumed. Some indirect forms of evidence were available. For example, the Think-About primary audience of fifth and sixth grade students and adult teachers guarantees two generational views of the series. The consortium of 41 state and provincial education agencies spans the United States and Canada. Regional, cultural, ethnic, and socioeconomic differences have been represented in ThinkAbout consortium meetings (Sloan, 1981). Recognition of possible differences among the audience subgroups meant that ThinkAbout programs would have to be developed in a manner sensitive to those differences.

Differences on some values did not mean differences on all values, however. The consortium and AIT remained committed to portraying real-life situations; but by early 1979, project vicissitudes required a reassessment of its direction. The reassessment, among other things, achieved more clarity about some values which would be "promoted" by the new series:

According to original mandates, programs were to show children the relationships between activities in school and out. That mandate remained unchanged; a "natural flow" between school and everyday life would be maintained. The programs would have about them an "element of realism" and one of "practicality" as well The problems and situations would be as realistic as possible, but the youngsters themselves might seem a bit unusual. They would be "thoughtful, deliberate, rational," and, although anyone would be proud to claim these children as his own, they would not be exactly like everyday kids. ... AIT had not only created a new series but a new creature as well, the "ThinkAbouter".

(Sloan, 1981, pp. 155 ff.)

A special focus on educational values was an inevitable result of the series goals. As the programs themselves and the content analysis

demonstrated, of course, a focus on educational values did not preclude the presence of other social or personal values like humor or helpfulness.

During the development of the content analysis, the prosocial goals of the project, the information needs of design and production groups, and previous research on values were issues which played off against one another and provided the ultimate criteria for decisions. This report will endeavor to give some of the flavor of that interplay, but the major focus is the final methodology and the values profile for the entire series. The value-laden content analysis methodology had its supporters and detractors among the staff; in a discussion of values, avoiding controversy seems impossible.

Instrument Development

Early in the spring of 1977, a paper had been commissioned by AIT which provided a formal beginning to the long process of developing the analysis of value-laden content. The early focus was on the development of criteria for instructional television programs. Marcia Sheridan's (1977) paper focused on the treatment of various societal groups and avoidance of stereotyping. Embedded in the paper were numerous concerns about values.

A program evaluation checklist followed the Sheridan paper, and two categories included were Goals, Values, and Feelings, and Democratic Values. Examples of the sub-categories were "equality of all people," "liberty and justice," "acquisition and application of skills necessary for living in a pluralistic world," and "positive regard for education and learning."

When the present content analysis began to take shape, some research studies on values were available and contributed to the identification

of values representing three facets of potential education impact. The first were terminal, end-state or social values (Christenson, 1977; Kitwood and Smithers, 1974). Examples of the 12 end-state values were justice, democracy, patriotism, freedom, and property. Phrased in a positive manner, they represented a consensus of the societal goals of many members of western societies. According to Christenson (1977), however, various groups within societies may give the values different priorities from one another. In instructional television programs, these values are conveyed via characters, interactions, plot structure, etc.

The second group, personal attributes, were conveyed primarily via characters and social interactions; personal attributes related closely to the role-modeling behaviors discussed elsewhere (Chapter 4). Examples included: self-respect/self-worth, ambition, cleanliness, respect for authority, and individualism.

The third group were instructionally-related characteristics; they were specifically selected because of their relationship to ThinkAbout's goals. Early design statements included four goals for the series, and these four were maintained throughout: systematic reasoning, confident and flexible thinking, effective expression, and self-management. Educationally oriented values, like communication, logical/rationality, and reflection, were expected to be frequently communicated by the program.

Within the consortium, discussions had occurred about both personal and educational values. While one group advocated modeling of children who are competent problem-solvers without adult assistances, another group arose to urge consideration of parents and teachers as resources and the need to model respect for authority figures. Both groups had

ascribed to the series goal of promoting independent learning among self-managing intermediate grade students. How much independent thinking should be encouraged was argued. The resolution was to include both value orientations in realistic settings. ThinkAbouters operated and thought independently; but in appropriate circumstances, ThinkAbout characters exhibited dependence on adult mentors, accepted limitations imposed by parents, and displayed behavior which communicated the values placed on obedience and respect for adults. An extra benefit of a balanced approach was the realism communicated to a target-aged population which faces the tension of accommodating simultaneous needs for independence from, and dependence upon, authority figures.

On the other hand, it was also recognized that some values would be emphasized, not balanced. ThinkAbout would, of necessity, embody certain personal and educational values by virtue of its philosophical orientation. For example, individualism and assertiveness are inherent to modeling independent learning. Positive valuing of competency and self-discipline are communicated when successful efforts at problem-solving are depicted.

Eventually identified were 36 values which were divided into three groups (Table 8). The division of values into three groups did not assume mutually exclusive categories. Social values are end-states and have been examined by other researchers. The humanitarianism category, however, was subdivided in order to provide more useful feedback to the design and production systems. The section on personal values included both instrumental (means-to-an-end) and end-state values. The labels or descriptors of personal values were selected for their relationship

to concepts used in the ThinkAbout instructional design and goal statements.

There was a point at which the selection process became arbitrary; distinctions between, and among, valued qualities became exceedingly difficult to make. For example, the characteristic "cheerfulness" was omitted in order to allow the broader category "sociability" to stand alone.

Table 8
Coding Categories for
Value-Laden Content

<u>Social</u>	<u>Personal</u>
Patriotism	Personal freedom
Humanitarianism	Individualism (nonconformity)
Helpfulness	Sociability
Generosity	Respect for authority
Sensitivity to worth of others	Obedience
Honesty	Politeness/courtesy
Property	Responsibility/Dependability/ Reliability
Democracy	Self-discipline
Justice	Self-respect/Self-worth
Freedom	Self-reliance
Equality of Sex	Assertiveness
Equality of Race	Achievement
	Competency
	Ambition
	Patience
	Courage
	Cleanliness
	Sportsmanship
	Humor
	Humility
<u>ThinkAbout</u> (Educationally Oriented)	
Open-mindedness	
Perseverance	
Communication	
Logicity/Rationality	
Imagination/Creativity	
Reflection	

After the list of values was tentatively set, the technical process of developing a content analysis instrument began. The source materials were defined: 60 ThinkAbout programs. The first step was to identify instances

of value-laden content. Several evaluators agreed to sit down with a tentative identification form and try it out on Program #53, "Making Your Point."

"Making Your Point" is one of a cluster designed to teach effective communications skills, and the educational content is communicated via a storyline in which Flash Foster is not picked for a basketball team. In order to convince the coach to rethink his decision, Flash and his friend, T.J., must communicate effectively. By using the quest to attain team membership as a vehicle to establish the need for communication, value was placed on a positive ambition. Observers could agree that the value permeated the program. Consensus was easy on ambition.

However, consensus was difficult to reach about other values presented. Flash and T.J. were assertive in their efforts, sometimes failing to exhibit respect for the authority of the coach. Those characteristics and the value statements implied by them did not, however, run through every scene. One of the first methodological decisions then was to use a thematic scene as the context unit. Five scenes per program would allow identification of a respect for authority in one segment of the story while assertiveness might occur in a different scene.

What recording units to use was not so easily resolved. For some time, the staff wrestled with the positive and negative expressions of values and the implications for scripting, production, and the series as a whole. In Program #53, Flash did not accept the coach's decision; he and T.J. concocted creative means of communication, sometimes surprising (and annoying) the coach. The behaviors bordered on a lack of respect for authority, albeit an amusing lack of respect. Positive

role-modeling was a commitment of the project. On the other hand, if Flash had acquiesced quietly to the coach's decision, two things could have happened: the program would have ended after 30 seconds of the the first scene, or dramatic tension would have been lost. For content analysis, the question was "Should incidence of positive vs. negative value statements be recorded?"

Another aspect of communicating value confused the issue. The absence of females, on the team and in the program as a whole, evoked a judgment of a negative instance of equality of sex. Pros and cons were expressed, raising more issues. For example, the premise on which the content analysis was based was AIT's intent to balance the series as a whole; one program with an all-male cast could be justified by the storyline and production considerations. In addition, Program #37, "How Do You Change Them?," depicted an all-female basketball team who had to examine and re-examine their criteria for a good team captain. Could the absence of one sex be acceptable within the limited content of a single program? The discussion evolved to a distinction between negative expressions of values and offensive expressions. The staff could agree that a value statement was made about the equality of sex and was identifiable in the absence of female major characters (or the presence of only males). Whether that value statement was acceptable was another matter.

Two dichotomous recording units temporarily resolved the issue. One dichotomous unit was the presence or absence of the value in the thematic scene. The presence of a value was recognized as possibly either a positive or negative circumstance. Both courteous and dis-

courteous acts make a value statement about courtesy. The second recording unit was a judgment of the value statement as either acceptable or problematic given the purpose of the scene.

Because of the two dichotomous recording units, one of four assessments of each value for each scene was possible: present-acceptable, present-unacceptable, absent-acceptable, and absent-unacceptable. The present vs. absent information related to questions like: Are the values shown those intended? Is the balance of values aimed at actually achieved? These questions referred to the representation and balance criteria for the series. The four-part judgment resulted in answers to questions such as the following: If a value is present, is its depiction acceptable? If absent, is the absence educationally acceptable? The methodological decisions required four major revisions of the content analysis form.

Inter-rater Reliability

Once the instrument was finished, reliability was established by a panel of seven teachers (see Chapter 1 for a discussion of the training and reliability procedures). Four ThinkAbout programs were analyzed by the panel and average percentages of agreement were obtained from the randomly paired content analysis forms.

The total number of possible agreements was computed by counting each value category twice for each scene. One possible agreement was counted for the presence or absence of the quality, and the other for its rating as acceptable or unacceptable. Once computed, the total number of possible agreements remained the same across all four programs.

The agreements among the random pairs of six raters averaged consistently about 90%. Across the four programs, the actual range of this reliability measure of the instrument was from 88.61% to 95.83% agreement. Table 9 presents data for the four programs.

Table 9
Inter-rater Reliability of
Value-laden Content Analysis

Series #	Title	# of Raters	Total # Possible Agreements	Range % Agreement	Average % Agreements
53	Making Your Point	6	360	90.28 - 94.17	92.22
16	What Do I Know?	6	360	88.61 - 95.83	92.41
8	Solving Problems	6	360	87.50 - 92.78	91.67
24	People Patterns	6	360	90.28 - 93.06	91.39
Average		6		89.17 - 93.96	91.92

After some turnover in the group of teachers, new panel members were involved in reliability checks. Training provided new panel members was similar to the original training program and levels of agreement were consistent with original reliability data.

RESULTS

The measures were devised to reflect the total series perspective and to relate that perspective in terms of a single program. The maximum tally of instances of value-laden content for a given value was five per program since each program was divided into five context units.

Similarly, the maximum acceptable or unacceptable ratings was five per program for each value on the list.

Rather than reporting the total number of instances in the series (maximum of 300/value), we wanted to convey a composite of ThinkAbout programs. Consequently, the average number of scenes per program was reported. For example, a value-laden message about helpfulness appeared quite often in ThinkAbout programs; the density of the helpfulness-laden content was indicated by the average number of scenes per program. Helpfulness was identified in an average of 4.07 scenes/programs across the entire series. In other words, just over four-fifths or 80% of the 300 thematic scenes communicated a value message about helpfulness. Table 10 provides the relative incidence of the values in descending rank order, and Figure 2 shows the same index for each value relative to other values in the same category and across categories.

Table 10
Analysis of Incidence of Value-laden Content in 60 ThinkAbout Programs

Social	Average # Scenes/Program	Personal	Average # Scenes/Program	Educational	Average # Scenes/Program
Helpfulness	4.07	Politeness/Courtesy	4.53	Communication	4.7
Sensitivity to Worth of Others	4.02	Cleanliness	4.5		
Equality of Sex	3.77	Sociability/Cheerfulness	4.42		
Honesty	3.77	Assertiveness	4.17	Logical/Rationality	4.3
Freedom	2.87	Individualism	3.95		
Property	2.83	Self-Reliance	3.78	Reflection	4.0
Equality of Race	2.50	Self-Respect	3.78		
Tolerance	2.07	Competency	3.68		
Generosity	1.77	Dependability/Reliability	3.47		
Justice	.68	Ambition	3.32	Openmindedness	3.7
Democracy	.60	Humor	3.10		
Patriotism	.016	Patience	2.92		
		Self-discipline	2.83	Imaginative/Creative	3.6
		Respect for Authority	2.62		
		Courage	1.6		
		Obedience	1.45	Perseverance	3.45
		Humility	1.33		
		Sportsmanship	.87		

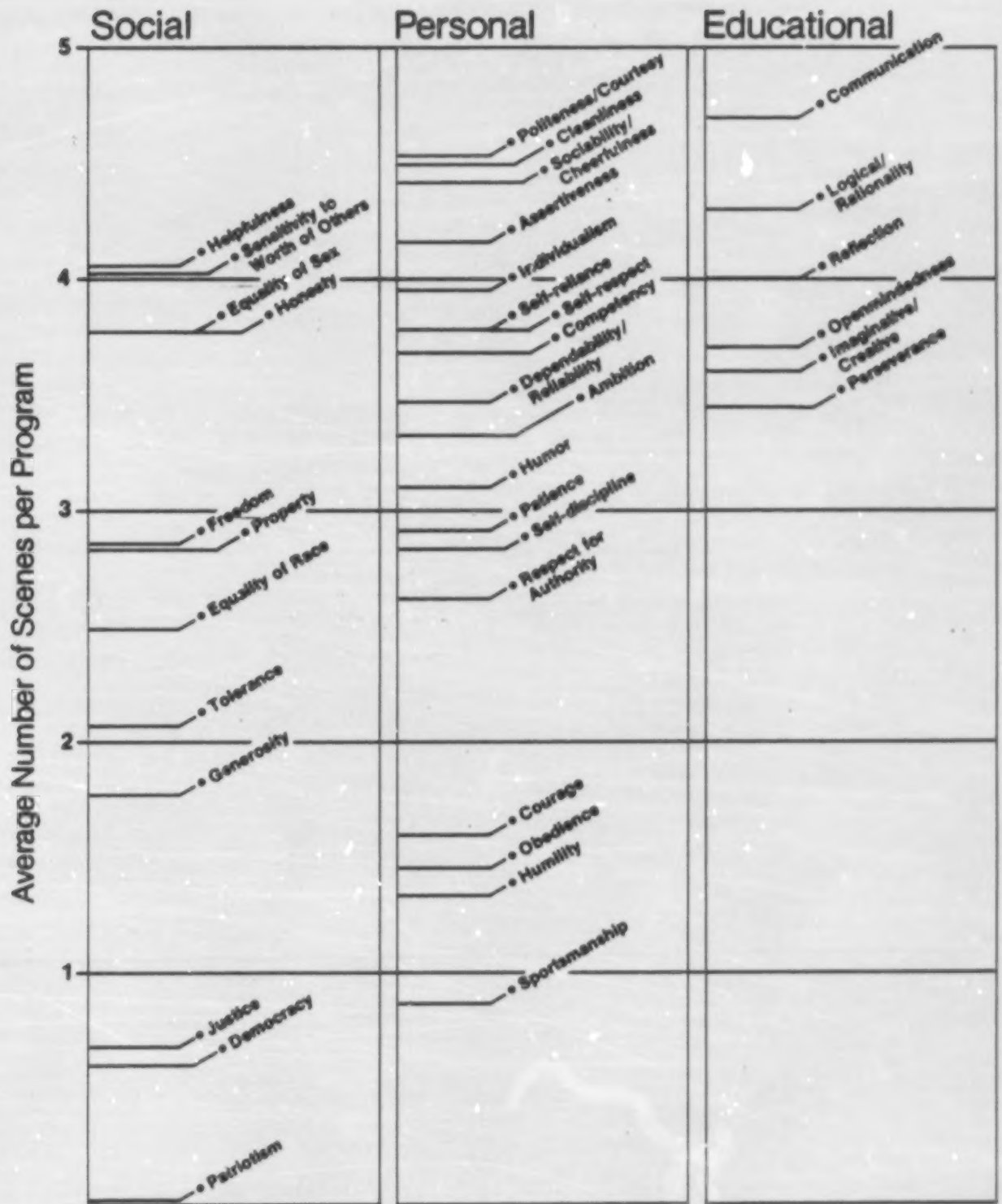


Figure 2.
Index of incidence of value-laden content over 60 ThinkAbout programs.

The 36 values of concern in the ThinkAbout content analysis were divided into three categories representing (a) societal goals, (b) personal attributes, and (c) instructionally related characteristics. The data for each category are summarized over all 60 programs with commentary on individual ThinkAbout programs as necessary. The 12 social or end-state values are reported first, followed by the 18 personal and the six instructionally related characteristics.

Social Values

The social values rated reflect goals of Western society. They were as follows: patriotism, honesty, property, democracy, justice, freedom, equality of sex, equality of race, helpfulness, generosity, tolerance, and sensitivity to the worth of others. The last four formed a constellation sometimes equated with humanitarianism in the research literature.

The average number of scenes per program in which each social value was identified is given in Table 10. Values are listed in the table in rank order from most frequently evident to least frequently evident.

Social values judged to be communicated most frequently were a group of four evident in an average of 3.81 scenes per program (almost four of the total of five scenes). These values were helpfulness, sensitivity to worth of others, equality of sex, and honesty. Both helpfulness and sensitivity to the worth of others are part of the humanitarianism constellation. In a program on "Brainstorming," raters judged helpfulness to be communicated in all five thematic scenes. After a phantom painter defaced the school hallway, the student council decided to help the custodian brainstorm solutions. Equality of sex

was communicated in four of the five scenes as Anita and George worked with other students to suggest helpful strategies.

Communicated somewhat less often but still present in an average of 2-3 scenes per program were value messages about freedom, property, equality of race, and tolerance. Both equality of sex and race were evident to teachers in the two-segment Program #16, "What Do I Know?". In the first segment, Brody, a black target-ager, locates a puppy lost by Rita (Hispanic) and her friend Isabella (white). In the second part, Pete (Asian) and his pal Marty (white) think they see a UFO and try to prove it.

Three politically oriented values--democracy, justice, and patriotism--were seldom judged as evident in the program. One example in which justice was communicated occurred in Program #46, "What's Enough?"; Bobby and Larry appeal to the Police Lieutenant Davis for help recovering a stolen bike, but Bobby is told he does not have sufficient evidence to justify his suspect's arrest.

Personal Values

Many of the group of 18 personal values were recognized frequently in the program scenes. Politeness, cleanliness, sociability, and assertiveness were present in virtually every ThinkAbout scene. Only two educational values (communication and logical/rationality) were as common or more common in the programs. Ten other personal values were regularly identified, many of them related to the goals of fostering the students' view of himself/herself as an individual capable of self-management.

In a number of programs or scenes, several value messages were identified as simultaneously present. For example, in Program #13, "The Bigger Picture," politeness, cleanliness, sociability, and assertiveness were all communicated

in addition to the instructional message on the importance of content in clarifying the meaning of a message. Two characters, Danny and his mother, encountered a major misunderstanding; they express their emotions assertively. Both were able to maintain a polite attitude of concern in their interactions. Danny met a sociable character named Carpenter, who helps Danny interpret his mother's message in the context of events in their family life.

Educational Values

Six educational values consistent with the goals of ThinkAbout were rated. They are: communication, logical/rationality, reflection, open-mindedness, imaginative/creative, and perseverance. Clearly indicated in Figure 2 is the density of educational values in the ThinkAbout programs. As intended, logical, rational ThinkAbouters did successfully communicate value-laden messages to the panel of raters (and, we expect, the students). In fact, educational values were identified as present in three and one-half (perseverance) to almost five (communication) scenes per program. In Program #45, "What's Important?", Christie and her friend Jamie methodically assessed pieces of information and reflected on their relevance to solving the mystery of Sir Gordon Grendel's death. Their adventures in Sir Grodon's castle required perseverance and imagination.

The results of the sixty program profile suggested a ThinkAbout world view which was consistent with the promise made to the consortium and with the intentions of the instructional design. The ThinkAbout world emphasized educational values, with communication and logical/rationality the consistently evident in interactions of the characters. The storylines moved from a poor communication towards the development of better communication skills, from the

lack of a logical approach to employing reasoning skills to solve problems. The problem-solving focus of the series was supported by frequent instances of reflection, open-mindedness, perseverance, and creative imagination. Only four social values and half of the personal values were so consistently identified. The "ThinkAbouter" lives and learns in a ThinkAbout society, and the society places a positive emphasis on helpfulness, sensitivity to others, and equality of sex.

Some personal attributes and social values were less emphasized in the ThinkAbout world. The absence of the values was considered acceptable by the raters, given their overall understanding of individual programs. ThinkAbouters did not often confront government representatives or problems of government. Consequently, justice, democracy, and patriotism were seldom identified as value-laden content. ThinkAbouters appealed to community agents such as the police, but the values depicted in those scenes was most often helpfulness. Courage was seldom identified except in cases of physical danger. Obedience and humility were seldom identified. Though these values were not actively communicated across the sixty programs, this is not necessarily a negative criticism of the program because the absence of the cited values was noted as "acceptable."

As mentioned above, teachers were asked to judge the acceptability of the value-laden communication. The instructions to the teacher were to consider each scene within the context of the program. Of the sixty programs, forty-seven were considered acceptable across all five scenes and for all values. Only twenty-one scenes of the 300 in the series were considered problematic; these scenes occurred in thirteen programs. One example of teacher concern involved Program #44, "Should I Believe It?". Teachers

considered all five scenes "not believable." The educational value questioned was logical/rationality. Logic or rationality was considered not present in the program because it had a farcical plot in which aliens were reported to have invaded the small community of Duncan. Twelve-year-old Sue investigated the story, carefully judged her sources of information, and wrote a school newspaper story with the headline "Friendly Aliens Scared Away." Two other scenes were questioned with respect to logic. In Program #16, "What Do I Know?" (scene 3), logic and rationality were considered not present and problematic. In Program #37, "How Do You Change Them?" (scene 3), the value-laden message was contained in the basketball coach's logic which was considered unacceptable by teachers.

Another teacher concern to which the content analysis was able to alert the staff involved a single scene in which several values were questioned. In Program #9 "What's the Meaning?", teachers found the last scene problematic. The program presents the communication model of a sender, a receiver, and information. Alfie is introduced to communication ideas by an imaginary professor, and in the last scene Alfie begins to reflect on the communication process in light of recent misunderstandings he had at school. He and his classmates all thought they would be on television and were vocally disappointed when their expectations were disappointed. Teachers found the last scene problematic with respect to the following values: self-discipline, assertiveness (in the sense of aggression), politeness/courtesy, obedience, and respect for authority. The scene involves students encountering a communication problem with their teacher, failing to obey the teacher's instructions, and expressing their disappointment loudly.

The remaining fifteen scenes in which teachers had questions were scattered

widely across the remaining eleven programs. Equality of race was questioned in five scenes of the 300; two of the four programs included white family groupings, and in two programs minority groups were represented among the minor character constellations. Humor at the expense of another character drew criticism in one program.

Several values were questioned in one scene out of 300. For example, an adult was impolite and discourteous to a target-age child; one boy failed to obey his mother's injunction to drink his milk before running out the door to school; and raters took exception to the lack of male input to a discussion about stereotyping people. This was the only incident considered problematic for the equality of sex value.

Summary

When ThinkAbout series is analyzed as whole the values which are most consistently evidenced across the programs are educational values. Only four of the social values and about half of the personal values are so frequently evident. When the evident values are synthesized, a sense of the ThinkAbout world emerges. On the basis of sixty programs, the ThinkAbout society is based on helpfulness, sensitivity to others, and equality of sex. The ThinkAbout person is clean, sociable, and cheerful. He/she is polite, courteous, and responsible. A self-respecting individual, the ThinkAbout child is confident, self-reliant, and assertive. ThinkAbout people value communication and a logical/rational approach to living. Problem-solving is supported by high degrees of reflection, open-mindedness, perseverance, and creative imagination.

CHAPTER 4

PERSONAL AND SOCIAL BEHAVIOR IN THINKABOUT

Perhaps no area of content analysis is more difficult to assess well than the role models presented via actors who become characters based on a scripted portrayal of a writer's mental image. However, fewer areas are of greater importance to the audience of adults who scrutinize television developed for children. A complete and objective assessment is virtually impossible. Completeness requires attention to wide-ranging characteristics, behaviors, and social interactions on screen. An objective assessment requires discrete categories which are easily distinguished by judges. In the development of a particular instrument, the two--completeness and objectivity--frequently become mutually exclusive characteristics.

The purposes of the ThinkAbout content analysis of personal and social behavior were to describe the role models provided and to identify stereotypic content. Accommodations were made to the concerns of completeness and objectivity; they are described below. The unavoidable complexity of the data analyses, precluded reporting the data during the production phase. Fortunately, other formative evaluation activities provided complementary information. For instance, consultant and teacher reviewers responded to open-ended questions about role models and stereotypes. This is the first report of the personal and social data.

The interests of the staff paralleled the concerns of other professionals and advocacy groups. Implicitly accepted were the assertions that youngsters attend to television models and that these children incorporate their perceptions into cognitive processes which affect perceptions of themselves and others. Since the inception of ThinkAbout's work, other research has provided support for the analysis of personal and social behaviors depicted on screen.

In fact, the evolution of the personal and social characteristics checklist was influenced by research literature more than any other aspect of the Think-About content analysis.

Comstock, Chaffee, Katzman, McCombs, and Roberts (1978) reviewed over 400 studies of the effects of television viewing on children and adults. They focused on the psychological processes behind effects because they "believe there is sufficient evidence that effects do occur for one to begin by assuming that they do occur" (p. 385). When considering the effects of role-modeling, they distinguished between the cognitive acquisition of behavior (attending to and retaining) and the performance of behaviors (motoric, motivational). They noted the complexity of research results when various prosocial and antisocial behaviors were studied. In spite of this complexity, they concluded that prosocial and antisocial modeling occur and often with rather strong effects.

In a MARC preview report (Media Action Research Center, undated) commercial programming having a biracial cast was analyzed for prosocial and aggressive content. An index was computed relating the frequency of behavior to the amount of time on screen. Striking differences occurred in a two-way sex and race classification. Verna (1975) found that males were dominant in commercials aimed at children. Males were likely to be more physically active, independent, or internally-oriented; females were passive and dependent on a role or activity involving other persons. Sternglanz and Serbin (1974) examined sex role portrayals on commercial television, finding that males outnumbered female by two to one. Males were more aggressive, constructive, and more often rewarded for behavior. Females were more often deferent, unrewarded, and punished for high levels of physical or verbal activity.

The importance of personal and social characteristics in studies of television is illustrated by a recent outpouring of research on role models in television. The Journal of Broadcasting (Fall, 1980) recently devoted the major portion of an issue to studies of portrayals of characters and audience perceptions. Greenberg et al. (1980) investigated sex roles, anti-social and pro-social behaviors, sexual intimacy, and use of alcohol or other substances in commercial television drama. Across the several analyses, Greenberg (1980) raised questions germane to the interpretation of data and to the assumptions about effects on young viewers: How much exposure to sex-role stereotyped, sexual, and/or consumption behaviors makes an impact? What role does the context, motive, and consequences of a behavior play in its impact? Can pro-social and anti-social behaviors balance each other in the overall impact on children? Weigel, Loomis, and Soja (1980) studied race relations depicted in 63 hours of prime-time programs and found that cross-racial relationships are infrequent and relatively formal. Dates (1980) examined race, racial attitudes, and perception of black commercial television characters by adolescents and found a strong relation between race and perception, but not between racial attitude and perception. Goff, Goff, and Lehrer (1980) related perceived sex role characteristics of female commercial television characters to sex role, sex, and attitude toward women of the respondents. In both Dates (1980) and Goff et al. (1980) the research questions stemmed from concerns about the personality development of young viewers.

In keeping with Clark (1972), the ThinkAbout content analysis considered positive treatment of a group as involving two stages--recognition and respect. Recognition of a group can be indicated by the frequency of group members on screen. The ThinkAbout analysis of demographic characteristics and surface

features recorded this aspect of positive treatment. The personal and social analysis was related from its inception to the demographic analysis; analyses of the major characters were a natural link between the two.

Respect for a group is communicated more subtly. Subtle indicators of respect depend on the viewer's value system as well as societal sanctions. That women are portrayed as married indicates to some viewers a social acceptability and respect; however, another viewer might point to the contrasting unmarried status of many male characters and see freedom attributed to males which is socially denied to married females. The freedom to aggress without punishment is frequently seen as an indicator of power. However in a specific portrayal, Character A might speak out forcefully to Character B and viewers can differ in interpreting the speaking out behavior as assertiveness (positive) or aggression (negative). If Character B does not respond in kind, a variety of interpretations is also possible. Character B could be seen as understanding, weak, or patronizing towards A. The interaction of the two characters can prompt the viewer to see Character A as self-assured, lacking self-control, accepted as person worthy of understanding and respect strong enough to intimidate, or demeaned and treated without respect. Obvious difficulties occur in assessing the wide-ranging subtle indicators of respect and the interpretations of role models. Portrayals, whether positive or negative, are complexes of behaviors and attitudes conveyed by or toward the character, and nuances interpretable in various ways. The Personal and Social Analysis had to capture simultaneously the respect element of positive treatment and produce reliable data descriptive of this complex phenomenon.

Instrument Development

The personal and social content analysis needed to look at a variety of

behaviors but maintain objectivity in the assessment. The need for objectivity and inter-judge reliability meant minimizing subjective interpretations. Consequently, the analysis was constructed to emphasize objective behavioral indicators. An accumulation of various behaviors indicated the presence of respect for any group.

Analyzing a single dimension of positive portrayal might have been simpler and would have followed the methods of many research studies. For example, the levels of physical activity and leader/ follower behaviors could have been isolated for analysis. The formative purpose of the content analysis, however, required a broader picture of the strengths and problems in portrayals. Selection of the behaviors was important because recommendations for future programs were an intended part of formative evaluation activities. Descriptions of the behaviors had to be clear and usable by script writers and producers; the behaviors had to relate to the intentions of the instructional designers and ThinkAbout goals; the behaviors had to relate to extant research literature; and the behaviors had to be easily identified so that raters could agree on occurrences in the program.

After a survey of studies relevant to television content, five broad groups of characteristics were selected: language style, activity style, social aggression, bias, and personal behaviors (Table 11). Activity style encompassed level of activity, nature of interactions, traditional vs. non-traditional role activity, and leadership. Social aggression was interpreted as involving harm or intent to harm, not competitiveness. The bias categories asked raters to determine whether a given major character evidenced a lack of respect or prejudice against certain groups. Also included was an item to note the resolution of the bias within the program. Bias categories were expected

Table 11

Coding Categories for the Content Analysis
of Personal and Social Characteristics

CHARACTER BY SCENE ASSESSMENT		
<u>General</u>	<u>Social Aggression</u>	<u>Personal</u>
Appears in this scene	Physically aggressive/ force	Seeks aid, protection, sympathy from others
Functions as a teacher, regardless of vocational role	Threatens physical aggression/verbally abusive	Protects, gives aid, is sympathetic
Language style	"Smarts off"	Self-deprecating/I'm no good
Bilingual	Consequences of aggression	Calls attention of others to own achievements/ desires recognition
Typical for age group		Realistic self-assessment/ recognizes own talent and/or weaknesses
Typical for ethnic group		<u>Think About Student</u> Characteristics:
Appropriate to situation		Uses systematic reasoning
<u>Activity Style</u>	<u>Bias</u>	Seeks information
Very active	Exhibits lack of respect/ bias against:	Persistent in efforts to learn/overcome obstacles
Moderately active	Younger than target-age	Displays confident thinking
Inactive/passive	Target-age	Displays flexible thinking
Cooperative activity	Teenager	Plans for effective communication
Competitive	Adult	
Solitary, independent activity	Senior citizens	
Non-traditional sex role activity	Minority or ethnic group member	
Neutral/common to both sexes	Exceptional/handicapped persons	
Traditional for age group	Males	
Non-traditional for age group	Females	
Neutral		
Initiates activity		
Follows lead of others		

to be seldom used, but the issue was of sufficient importance to merit its inclusion. Personal characteristics included indicators related to nurturance, succorance, self-esteem, and ThinkAbout student characteristics.

ThinkAbout was concerned not only with student characteristics but also with characteristics of teacher models. Major characters assuming the role of a teacher were identified; the character need not have been a classroom teacher or professional educator to be identified in the program. For example, in Program #3, "Block-Busting," a magician assumed a teaching role.

Data resulting from this instrument were scene-by-scene profiles of the selected personal and social characteristics of major characters. The universe of source content was the entire series of programs. The context unit, or the largest unit examined for recording, was the behavior of a major character within a thematic scene. By aggregating over scenes, role models and stereotyping issues were assessed. Once data were obtained from this and the demographic content analysis, merger of data files allowed the analysis of personal and social behaviors based on sex, age, ethnic group membership. By this inferential use (Carney, 1972) of the content analysis, one could assess how well the programs met the expectations set up in advance.

Inter-rater Reliability

After the personal and social characteristics checklist was developed, six teacher raters completed reliability ratings on four ThinkAbout programs. Reliability data were analyzed using percentages of agreement averaged across randomly paired raters.

Because the number of characters who appeared in each scene changed throughout an individual program, the number of possible agreements was first computed on a scene-by-scene basis. Categories in which raters had to choose

among mutually exclusive responses were assigned one possible agreement per character who appeared in that scene. In several categories, multiple characteristics could be applicable to a given character; in those cases, each possible characteristic was counted as one possible agreement.

The agreements among the random pairs of six raters ranged from 84.04% to 92.8% across the four programs. The titles of these programs and their relative percentages are listed in the order of the group's rating in Table 12.

Table 12
Inter-Rater Reliability of Content Analysis of
Social and Personal Characteristics

Series #	Title	# of Raters	Total # Possible Agreements	Range % Agreement	Average % Agreement
53	Making Your Point	6	1140	86.64-92.87	90.00
16	What Do I Know?	6	1039	87.25-91.78	88.86
8	Find Your Guide	6	1901	84.04-89.60	86.11
24	People Patterns	6	2074	86.97-89.44	88.09
Average				86.23-90.92	88.27

RESULTS

Because the content analysis focused on role models, the data are reported about the groups of major characters. The following sections cover characterizations of ThinkAbout student behaviors, ThinkAbout teacher behaviors, language style, and characterizations of the following demographic groups: males and females, age groups, and minority vs. white groups.

These analyses focused on characters who did, or did not, exhibit a given behavior or characteristic in at least one thematic scene. These are comparisons unweighted by the number of scenes in which a character appeared. A weighted analysis would be possible but much more complex and difficult to interpret.

Representation is indicated by the frequency with which a given demographic group exhibits a specific behavior. Balance across the demographic groups must be tested statistically by comparing the actual frequencies or proportions against those expected. Expected frequencies, or proportions were determined in several ways. For example, the expectation was that a balanced series would depict equal proportions of males and females engaged in Think-About behaviors. The data were tested statistically for significant imbalance or lack of proportional distribution of the behavior across demographic groups. Significant imbalance is indicated by a binomial test probability or χ^2 probability of less than .05. Imbalance can be present in either direction; for example, the proportion of males displaying a behavior may be significantly greater than females, or vice versa. What is stereotypic or undesired role-modeling depends on both the behavior and direction of imbalance.

ThinkAbout Student Behaviors

A small group of personal behaviors specifically related to the academic, problem-solving goals of the series. These behaviors included:

- using systematic reasoning,
- seeking information,
- persistence in an effort to learn,
- displaying confident thinking,
- displaying flexible thinking, and
- planning for effective communication.

Of particular importance to the developers of the series was a consistently balanced distribution of ThinkAbout goal-related behaviors. Some of the questions for the content analysis were: Are ThinkAbout behaviors modeled by both males and females? by both minority group representatives and whites? by various age-groups? Are the incidents of modeling balanced across these groups?

The breakdown of each ThinkAbout goal behavior by sex of character modeling the behavior is shown in Table 13. Across 60 programs and 216 major characters, females were as equally likely as males to model the ThinkAbout goals of using systematic reasoning, displaying confident and flexible thinking, planning for effective communication, persisting, etc. None of the ThinkAbout goal-related behaviors was imbalanced with respect to sex of characters.

Table 13
Modeling of ThinkAbout Goal Behaviors
Assessed by Sex of Major Character

Variable Descriptor	Frequency*		Significance Level (p)
	Male	Female	
Uses systematic reasoning	79	79	.617
Seeks information	83	76	.956
Persistent in effort to learn	74	78	.861
Displays confident thinking	91	84	.977
Displays flexible thinking	70	72	.740
Plans for effective communication	41	47	.594

* Maximum N = 216 major characters

The distribution of ThinkAbout behaviors across the minority and white groups was expected, at least, to conform to the 1977 school age population percentages (15.2% minority, 84.4% white). For example, of the 158 characters who modeled systematic reasoning, 24 minority characters should be among them for a balanced distribution. For these analyses, the six minority ethnic subgroups were collapsed to a single minority classification and contrasted with the white subgroup.

Results of the analyses included five statistically significant binomial test probabilities. They suggested that such distributions of behaviors across ethnic groups would occur by chance only one in 10,000 times. In these five ThinkAbout behaviors (Table 14), minority characters were over-represented. The minority role models used systematic reasoning, sought information, persisted in efforts to learn, and displayed confident and flexible thinking more often than expected. For the last ThinkAbout behavior (planning for effective communication), the proportions were balanced with respect to population percentages.

Table 14
Modeling of ThinkAbout Goal Behaviors
Assessed by Ethnic Group

Variable Descriptor	Frequency*		Significance Level (p)
	Minority	White	
Uses systematic reasoning	39	119	.0001
Seeks information	39	120	.0001
Persistent in effort to learn	35	117	.0007
Displays confident thinking	42	133	.0001
Displays flexible thinking	35	107	.0001
Plans for effective communication	27	61	.999

* maximum N = 216 major characters

The occurrence of ThinkAbout goal-related behaviors across age groups would be expected to reflect the distribution of age groups within the series. Given the large number of target-agers (N=124, 57.4%) in the programs, most of the ThinkAbout behaviors would likely be performed by fifth and sixth graders.

Table 15 presents the frequencies of occurrence and Chi² significance levels for each behavior. The results indicated that two of the six ThinkAbout behaviors (using systematic reasoning and seeking information) were balanced in their occurrence. The four which were imbalanced all favored positive role-modeling by target-agers. Target-aged and younger than target-aged characters were heavily weighted towards persistence in an effort to learn. While target-agers and senior citizens were often seen as confident thinkers, younger than target-aged characters, teens and adults did not so frequently display confident thinking as might have been expected by their overall representation. Target-agers and teens were all judged to have planned for effective communication.

Table 15
Modeling of ThinkAbout Goal Behaviors Assessed by Age Groups

Variable Descriptor	Frequency *					Total	Significance Level (p)
	Younger Than Target-Age	Target-Age	Teen-Age	Adult	Senior Citizen		
Uses systematic reasoning	3	94	20	38	3	158	.1832
Seeks information	3	98	17	37	4	159	.2808
Persistent in effort to learn	4	108	17	21	2	152	.0001
Displays confident thinking	2	107	18	42	6	175	.0459
Displays flexible thinking	2	94	15	28	3	142	.0048
Plans for effective communication	0	63	10	15	0	88	.0012

* Maximum N = 216

ThinkAbout Teacher Models

Concerns about 'stereotype depictions of classroom teachers have been voiced previously (Gerbner, 1974). In ThinkAbout, the decision to portray real-life events both in and out of school settings meant taking a view of teachers broader than the traditionally defined classroom teacher. Clearly, parents, adult friends, and children were all teachers of one another in ThinkAbout programs. Content analysis judges were asked to identify major characters who functioned as teachers within the drama of a given program, regardless of their ostensible vocational role or age. Characters identified as teachers were a wide-ranging and interesting group; they included classroom teachers, a magician, target-agers teaching each other, parents, and sometimes a character constructed out of the imagination or dream of a target-ager.

In all, 99 (45.8%) of the 216 major characters functioned as teachers. Of the 99, females slightly outnumbered males (52 females, 52.5% versus 47 males, 47.5%). The difference was not significant statistically when the non-parametric binomial test was computed ($p=.688$). The percentages closely approximate the 1970 U.S.A. population distribution of males and females.

The teachers reflected the overall representation of white and minority categories. Of major characters identified as teachers, 78 (78.8%) were white, 21 (21.1%) were minority. The proportions are balanced with respect to the 1977 school age distribution of white vs. all ethnic groups ($p=.960$).

Attributes of ThinkAbout teachers were examined in two-way classifications by sex and ethnic group, and sex and age group. Table 16 depicts the relation between sex and ethnic classification of teachers in comparison to the total group of 216 major characters. About half of all characters were teachers,

Table 16

Frequency and Total Percentage of Teacher Models by Sex and Ethnic Group

	White Male	White Female	Min. Male	Min. Female	Total
Not Teacher	48 (22.2)	40 (18.5)	16 (7.4)	13 (6.0)	117 (54.2)
Teacher	38 (17.6)	40 (18.5)	9 (4.2)	12 (5.6)	99 (45.8)
Total	86 (39.8)	80 (37.0)	25 (11.6)	25 (11.6)	216.(100.0)

$\chi^2=1.674$, $df=3$, $signif.=.643$

and similar proportions of each sex by ethnic group classification were teachers. The nonsignificant χ^2 value ($p=.643$) indicated a proportional distribution of the teaching function across the sex and ethnic categories within the context of all major characters. When characters who functioned as teachers were analyzed separately, the distribution across sex and ethnic groups remained proportional ($\chi^2=.053$, $df=1$, $p=.817$). ThinkAbout did not stereotype the teaching function by linking it to white or minority females only.

The age groups most frequently functioning as teachers were the target-age group, followed by the adult group. The frequency of teachers in the two age groups was related to the heavy concentration of those age groups in the series. Proportionally, however, adults more often fulfilled a teacher function than any other age group. The frequency and column percentages given in Table 17 summarize the relative percentages of each group who functioned as teachers and those who did not. Neither younger children nor senior citizens were often judged to serve a teaching functioning. The small total numbers in the two age groups are, in part, responsible.

Bilingual Characters. In addition to demographic representation of various groups, the ThinkAbout staff and consortium wanted to represent bilingual characters as a realistic link to the everyday lives of many prospective ThinkAbout viewers.

Eleven ThinkAbout major characters were bilingual, 5.1% of the total group of major characters. The distribution of those speaking only English and those considered bilingual were balanced across sex (English-only $p=.956$; bilingual $p=.549$). Of the 11 bilingual characters, 7 were white and 4 were ethnic group members, also a balanced proportion ($p=.983$). Of the 11 characters, three were white males, four were white females, one was a minority male, and three were minority females.

ThinkAbout contains bilingual characters from all age-groups except the younger than target-age group. Bilingual teenagers and senior citizens were proportionally higher in representation than other age-groups. Of the teenage group, 12.5% were bilingual. The single bilingual senior citizen represented 14.3% of the total group of senior citizens.

Language appropriateness. Rather than analyze a multitude of specific language behaviors, the global appropriateness of each character's language was evaluated for the age and ethnic group of the character, as well as the formality or informality of the situation depicted in the program. When analyzed by sex of character, all three style variables were proportionally represented. However, when analyzed for minority/ethnic versus white characters, the proportions were imbalanced favoring the minority and ethnic group category ($p<.05$). Relatively more minority characters were considered to have appropriate language style for their age and for the type of situation depicted.

Table 17
Frequency and Column Percentage of Teacher Models by Age Group

	<u>Age Groups</u>					Total N
	Younger than TA	Target- Age	Teen- Age	Adult	Senior Citizen	
Teacher	1 (20.0)	52 (41.9)	10 (41.7)	35 (62.3)	1 (14.3)	99 (43.8)
Not Teacher	4 (80.0)	72 (58.1)	14 (58.3)	21 (37.5)	6 (85.7)	117 (54.2)
Total	5 (100.0)	124 (100.0)	24 (100.0)	56 (100.0)	7 (100.0)	216 (100.0)

$\chi^2 = 11.343, p = .023$

Language Style

Two aspects of language style were considered important to the formative content analysis of ThinkAbout--bilingual character representation and three style characteristics. Teacher-raters were asked to judge whether the style of language was typical for the age-group, for the ethnic group, and for the formality or informality of the situation depicted. These aspects of language style were considered to be characteristics which might promote or inhibit the identification of students with ThinkAbout characters. For example, the staff sought to avoid creating target-agers who sounded too adult or too intellectual. In addition, the project's intention was to avoid both "white-washing" the conversations of minority ethnic group representatives and portraying stereotypic language styles. The ThinkAbout programs also attempted to depict realism in colloquial conversation without sacrificing grammar and word-usage acceptable to the educators who would scrutinize the series.

Language style was examined for its age-group realism. Only five characters of the 216 major characters were considered to have a language style not typical for the age-group of character. Language of three teenagers (12.5% of the teenage group) and two adult characters (3.6% of the adult group) was considered atypical. A special concern of the staff was to avoid adult-sounding or overly intellectual portrayals of target-agers (N=124). It was thought that such portrayals would reduce the possibility that fifth and sixth graders would find the characters like themselves or their peers. Content analysis demonstrated that the staff had been successful. All target-agers were judged to have a language style typical of their age-group.

Depictions of Three Demographic Groupings

While the demographic characteristics content analysis provided evidence that various groups are well-balanced across the ThinkAbout programs, it remains to be shown that the portrayals of demographic groups are balanced with respect to prosocial and role-modeling behaviors. A number of behaviors were examined for three demographic characteristics (sex, ethnic group, and age). The behaviors were selected to be consistent with indicator of stereotypes reported in the literature. Behaviors related to activities, social aggression, bias against other characters, and personal behaviors, relating to nurturance/succorance and achievement, were examined. (Refer to Table 11 for the breakdown of the four behavior categories into variables.) The incidence of behaviors are reported first for males and females, then ethnic groups and last for age groups.

Male/Female. Only one of the fourteen separate activity variables was significantly imbalanced in the representation of male vs. female major characters. The imbalance occurred on the portrayal of sex-role related

activities. While traditional and neutral activities were balanced, the non-traditional activities were disproportionally distributed across males and females ($p < .001$). Eighteen major characters were cited as involved in at least one non-traditional activity in a program; of the eighteen, females ($N=16$) far outnumbered males ($N=2$). In sharp contrast to studies of commercial television cited above the activity variables did not show stereotyping of males being active and females being passive. Nor were males more likely than females to initiate activities.

Incidents of social aggression were also examined for sex bias. Social aggression was extremely rare in the ThinkAbout programs. For example, the most common category across the 60 programs was "smarts off." Eleven characters were judged by teachers as smarting off; nine were males and two were females which resulted in a trend toward a significant difference ($p=.065$). All other categories were balanced according to the binomial test probabilities. In contrast to other television research which suggests that consequences of aggression tend to be experienced more by female than male characters, in the ThinkAbout series, consequences were equally distributed across the male and female groups.

The prosocial goals of ThinkAbout included both the intentions of modeling certain positive behaviors and the exclusion of others. To check the degree of success in excluding behavior by characters which depicted lack of respect for, or bias against, demographic groups, the bias subcategories were created. Few incidents of bias were recorded, and several of those were part of the storyline of the program. When male and female major characters were analyzed, incidents were balanced on every variable. In cases of lack of respect shown toward younger than target-agers, minority groups, and females,

so few incidents were judged as present that the binomial test could not be run. (At least two incidents must occur across the 60 programs for the computer program to analyze the data.)

Six behaviors were included in the personal behavior category. The frequency of these personal behaviors was higher than that of either social aggression or bias since most of them are positive behaviors. A balanced representation would assume that about half the incidents would be recorded for male characters and about half for female characters. Binomial tests indicated no statistically significant differences between males and females.

Ethnic Groups. After all six minority ethnic groups were combined, the result was a two-category distribution for minority (N=50) and white (N=168) major characters. Of the 14 activity style variables, seven were significantly disproportional. In each case, representation by minority group members was higher than expected. For activities depicted in ThinkAbout programs, minority characters were over-represented in being judged as very active (physically active), moderately active, cooperative, initiating activity and following the lead of others. They were also over-represented in activity common to both sexes or neutral with regard to traditional sex roles. Activity engaged in by minority characters was more often than expected judged to be typical for the age groups of the character (Table 18). The remaining seven variables were balanced with respect to the representation of white and minority characters. For none of the 14 variables, were minority characters under-represented in the analysis of activity-related content.

The few incidents of social aggression which occurred in the 15 hours of ThinkAbout programming, were analyzed for minority vs. white balance. The frequencies and binomial test proportions are given in Table 19 for

each of the four aggression variables. All variables were balanced.

Table 18

Frequency and Test of Proportions of Minority and White Characters
Evidencing Activity Style Characteristics

Variable	Frequency**		Binomial Test Signif.
	Minority	White	
1. Very Active	25	82	.005*
2. Moderately Active	46	136	.000*
3. Inactive/Passive	18	50	.995
4. Cooperative	49	145	.001*
5. Competitive	7	16	.984
6. Solitary, Independent	17	60	.962
7. Traditional Sex Role	22	49	.9998
8. Non-traditional Sex Role	3	13	.712
9. Neutral/Common to Both Sexes	45	129	.001*
10. Typical for Age Group	49	134	.001*
11. Atypical for Age Group	1	11	.436
12. Typical for All Ages	9	21	.989
13. Initiates Activity	44	143	.0001*
14. Follows Lead of Others	34	99	.0001*

* Statistically significant imbalance favoring minority major characters.

** Maximum N = 216

Table 19

Frequency and Test of Proportions of Minority and White
Characters Displaying Aggressive Behavior

Variable	Frequency*		Binomial Test Signif.
	Minority	White	
1. Physical/Force	0	6	.272
2. Threatens Physical Aggression/ Verbally Abusive	2	8	.815
3. "Smarts Off"	3	8	.928
4. Consequences of Aggression	2	6	.891

* Maximum N = 216

The bias category included 10 variables which were assessed for balance across minority and white character groups. The data is presented in Table 20, and indicates that only one variable (bias resolved) was statistically disproportionate. The bias or lack of respect shown to another character was more often resolved in the content of the program for minority than white characters. Two variables resulted in too few incidents to process the data. They were lack of respect or bias towards characters who were younger than target-age or who were minority group members. For all seven other categories, neither white nor minority characters exhibited disproportional degree of lack of respect towards other characters.

Table 20

Frequency and Test of Proportions of Minority and White
Characters Exhibiting Bias Category Behaviors

Exhibits lack of respect or bias against:	Frequency*		Binomial Test Signif.
	Minority	White	
1. Younger than TA	—	—	—
2. Target-agers	1	8	.593
3. Teenagers	0	4	.517
4. Adults	0	2	.719
5. Senior Citizens	0	2	.719
6. Minority/Ethnic Groups	—	—	—
7. Exceptional/Handicapped	2	2	.112
8. Males	2	1	.062
9. Females	3	8	.928
10. Bias or lack of respect resolved	24	86	.008

* Maximum N = 216

Empty cells indicate too few incidents to process data

The personal behavior category included six behaviors. Four of the six behaviors were imbalanced by the over-representation of minority group members. Minority characters were more likely to be nurturant and succorant, make realistic self-assessments, and recognize the achievements of others. Minority and white character groups were proportionally represented among behaviors which were self-deprecating and in seeking recognition.

Table 21

Frequency and Tests of Proportions of Minority and White
Characters Displaying Personal Category Behavior

Variable	Frequency ^a		Binomial Test Signif.
	Minority	White	
1. Seeks aid, protection, sympathy	24	86	.008
2. Protects, gives aid, sympathy	22	82	.014
3. Self-deprecating	6	15	.969
4. Seeks recognition of others	19	70	.956
5. Recognizes achievement of others	27	91	.002
6. Realistic self-assessment	26	83	.001

^a Maximum N = 216

Two-way analyses: sex by ethnic. In the television literature, bias was found in commercial broadcasts when both sex and ethnic characteristics were analyzed simultaneously. In the ThinkAbout content analysis, the 216 major characters were divided into four groups (white male, white female, minority male, minority female). Personal behaviors were tested for proportional representation across the four groups. Two kinds of proportional representation were assessed: (a) balance between characters who exhibited

a behavior versus those who did not; (b) degree of balance across the four groups for only those characters who exhibited the behavior.

Only one of the fourteen activity style variables was found to be disproportionally distributed. Across all programs, males were depicted only twice in non-traditional sex-role activities, and in both cases, the males were white. Females, most of them white, were often seen in non-traditional sex-role activities. For example, in a program on stereotyping people, both Lisa and Dr. Tyler, a female physician, were judged to be engaged in non-traditional sex-role behaviors. Angie, a black female, junior high rock-band leader, was considered non-traditional in her behavior as she leads her group in both music and checking their conclusions before they act. Both traditional behaviors and those common to both sexes were proportionally distributed. Important confirmation of the efforts to create positive role-models was that evidence of stereotyping failed to emerge even when sex and ethnic variables were combined.

Personal characteristics were examined in the same two-step method described above. When both the sex and ethnic group of all major characters were considered, none of the Chi^2 values was significant. Balance was achieved for each of the six personal behaviors. When only characters who exhibited the personal behavior were examined for proportional representation, all comparisons again indicated satisfactory representation of sex and ethnic group.

The social aggression and bias variables overlapped in their occurrences. A relatively small group of programs were involved in all of the incidents. Most of the incidents were integral to the story line and set up the problem to be solved by the use of ThinkAbout reasoning skills.

When incidents of social aggression were examined, none was disproportionately distributed across the four sex by ethnic categories of characters. The incidence was quite low, however. For example, characters who were physically aggressive included only three white males and three white females. The programs included no physically aggressive minority characters. With respect to the threat of physical aggression or verbal abuse, no minority females were tabulated. When bias was examined for the sex by ethnic classification, none of the variables was significant except bias towards males. Three incidents of bias towards males occurred. No incident of bias against females was tallied in any of the 60 programs. The variable with the highest level of frequency was the resolution of bias.

Age Groups. Because of the weighting of the target-age group, this analysis examined the proportionally representation across two dimensions. The five age groups formed one dimension; the second was a dichotomous classification of characters who were judged to demonstrate the behavior vs. those who were not. The Chi^2 statistical test assessed the proportionality of a given behavior distribution across the two-by-five matrix. The Chi^2 value is significant ($p < .05$) when imbalance is so extreme as to be unlikely to occur by chance along more than 5 times in 100 distributions. The data analysis essentially judged the series against its own age-group distribution. Personal behaviors relating to activity style were examined for differences among the age groups. The Chi^2 values and significance levels for each activity style variable are reported in Table 22. Eleven of the fourteen variables were balanced with respect to age distribution.

While level of physical activity was balanced for two of its three variables, the very active subcategory was disproportionally distributed; of the

Table 22

Summary of χ^2 Analyses of Activity Style Variables by Age-Group Representation

Activity Style Variable	χ^2	Significance
1. Very Active	23.91	.0001*
2. Moderately Active	2.72	.6055
3. Inactive/Passive	5.17	.2705
4. Cooperative Activity	8.32	.0805
5. Competitive	4.95	.2926
6. Solitary/Independent Activity	3.47	.4822
7. Traditional Sex-Role Activity	5.20	.2675
8. Non-traditional Sex Role Activity	6.22	.1832
9. Neutral/Common to Both Sexes	16.78	.0021*
10. Typical for Age-Group	18.76	.0009*
11. Atypical for Age-Group	5.15	.2725
12. Typical for All Ages	3.23	.0706
13. Imitates Activity	5.94	.2035
14. Follows Lead of Others	7.78	.1000

* Statistically significant imbalance

112 (51.9%) characters who were very active, high proportions were target-agers and teenagers. Lower percentages of adults and senior citizens were found in the very active category.

Whether the activity was typical for the age group or atypical for the age group was disproportionally distributed while behaviors typical for all ages were balanced. Ninety-four percent (N=203) of the characters were considered to be involved in activities typical for their age groups. The remaining 6% (N=13) were considered to be involved in atypical sex group activities. The teenage and senior citizen categories had more characters who were not considered typical than one would expect on the basis of the overall distribution.

The depiction of aggression in ThinkAbout has been discussed previously as occurring very infrequently. The four aggression variables, however, were tested for differences across age groups. None of the four resulted in a significant imbalance. In other words, no single age-group or combination of groups were aggressive to the exclusion of the others..

The age group analysis also investigated the possibility that characters had shown bias against, or lack of respect for, a specific one of nine demographic groups. Whether that the incident was resolved within the program was also tabulated. None of the categories of bias were disproportionately represented across age groups.

The frequency of six personal behaviors was also analyzed across age groups. The distributions of three were balanced; they included protecting and giving aid, seeking recognition, and recognizing the achievements of others. Seeking aid/protection was disproportionately distributed across the age groups with younger than target-age and target-age characters seeking aid and protection more often than one would expect ($p < .05$). The other three age groups sought aid less often than might be anticipated by chance alone.

The self-deprecating variable was also significantly imbalanced, but in this case all groups were critical of themselves less often than one would expect on the basis of a random distribution. No incidence of self-deprecation was reported for either younger than target-age or senior citizen groups. Only one incident occurred for either teenagers or adults. No incidents were reported for 105 (84.7%) of the 124 target-age major characters.

Realistic self-assessment was also tabulated, and target-agers were found to be much more likely to make realistic self-assessments than one would predict by chance alone. Apparently, ThinkAbout characters display insight

into their own behavior and an objectivity in evaluating it, regardless of their age.

Summary

Both the ThinkAbout staff and supporting consortium were concerned that the series provide positive role models and include social content. The purposes of the content analysis of social and personal behaviors were to describe role-models in terms of prosocial content and identify stereotypic content.

Six major categories of behavior with 43 sub-categories for coding data were constructed. The elaborate set of coding categories for ThinkAbout student goal behaviors, teacher models, language style, activity, social aggression, bias against demographic groups, and personal behaviors provided a look at content areas in which potential for bias or stereotyping is high. Equally high, of course, is the potential for modeling prosocial behavior if care and attention supplement concern about the production of educational materials. Each of the behavior categories was tabulated and analyzed for representation by sex, ethnic, and age groups.

Both ThinkAbout goal behaviors and the teaching function were balanced across sex and ethnic groups. Target-agers were overrepresented on some ThinkAbout behaviors which might have been expected since the dramas typically revolved around problems situations fifth and sixth graders encounter. To solve their dilemmas, the ThinkAbouters needed to use ThinkAbout goal behaviors and related skills. Often they needed to learn new strategies, and a teacher sometimes helped. The teaching characters were usually target-agers or adults. Adults were over-represented among the characters who functioned as teachers.

Sex bias virtually did not occur in the activity-related, personal,

aggressive behaviors analyzed. In fact, an active reversing of sex-role bias occurred in that females were shown in significantly more non-traditional activities than one would expect on the basis of a random distribution.

The tendency in ThinkAbout was to over-represent minority groups rather than under-represent them. For example, minority characters were over-represented in activity, cooperation and leadership. Behaviors generally considered more negative, such as inactivity/passivity, competitiveness, etc., were balanced across white and minority ethnic groups. Similarly, four of the more positive personal behaviors found ethnics over-represented (e.g., giving aid, seeking aid, making realistic self-assessments and recognizing the achievement of others). Two sometimes negative behavioral descriptions (self-deprecation and seeking recognition of accomplishments) were balanced across white and minority characters.

No minority characters were physically aggressive although minority males were represented in the other social aggression categories (threat of physical aggression, "smarting off," etc.). No minority females were depicted in any aggressive circumstances. Because aggressive behavior of any variety was extremely rare, the representation was statistically proportional and balanced even without representation by minority females.

ThinkAbout modeled various age-groups involved in wide ranging behaviors. The few incidents of aggression or bias were balanced across age-groups. Leadership and styles of social interaction were balanced, for example, passive behaviors were balanced. ThinkAbout showed active senior citizens, not biased depictions of only passive senior citizens. Target-agers and teenagers, however, were "very active" significantly more often than either adults or senior citizens. The nurturance and need-achievement issues were balanced, but the two youngest

age groups significantly more often sought aid or protection than other age-groups. All of the ThinkAbout age groups were less critical of themselves (self-deprecation) than expected on a statistical basis. Perhaps part of their ability to be less critical of themselves was balanced in effect by their high tendency to make realistic self-assessments. Think-About target-agers, in particular, were especially adept at making realistic self-assessments.

In conclusion, the ThinkAbout series presents role-models in which both males and females, minority and white characters are likely to exhibit systematic reasoning and persistence in problem-solving efforts. ThinkAbout characters teach and learn from one another; and, across a wide range of social and personal behaviors, prosocial values are upheld.

CHAPTER 5

FINALLY

The expectations placed on a major instructional television series come out of a sense of hope that the quality of new instructional materials will supersede the old, and out of an insistence by the educational community that instructional television materials go beyond the level of commercial television products in providing prosocial content. For the ThinkAbout series, expectations were high for it as both a new curriculum offering and a model of what instructional television can be. Aimed at fifth and sixth graders, ThinkAbout's sixty fifteen-minute programs offered students opportunities to improve their reasoning, study, mathematics, and language arts skills and to apply them repeatedly. For ThinkAbout, the expectations included cultural and geographical representation of major groups within the United States and Canada, inclusion of pro-social content, and positive role modeling.

The need for the ThinkAbout content analysis arose out of the recognition by the staff and consortium of an inevitable hidden curriculum as well as the need to evaluate the success in meeting stated instructional design intentions. Content analysis techniques offered a methodology useful in tracking representation and balanced across the series and identifying prosocial content.

While the original use of content analysis in the ThinkAbout project was a formative evaluation technique and was part of a self-correcting production process (Jochums, 1981), this report describes a profile of all sixty ThinkAbout programs. It indicates the high degree of success achieved by the project in meeting its intended goals of cultural representation, pro-social content, and positive role modeling.

The ThinkAbout series met the expectations of the consortium and staff for representation of several demographic groups. Not only were sex and ethnic/minority groups represented, but the balance of ThinkAbout characters was very close to national population norms. All age groups were represented in ThinkAbout, although the target age group of fifth and sixth graders was substantially over-represented for purposes of instructional design. ThinkAbout characters represented exceptional characteristics such as physical handicaps or socially distinctive characteristics. In a few programs, the physical handicap was a major focus in which the characters struggled with their handicap. Real-life situations were evident in that the educational materials depicted students using ThinkAbout skills in community, home, and classroom settings.

In addition to concerns about demographic representation and balance, the values depicted by the programs were also investigated. The project intention was to depict situations in which value was placed on ThinkAbout goals such as systematic reasoning, confident and flexible thinking, effective expression, and self-management. Other educationally oriented values like communication and reflection were expected to be reflected in the programs as well. In addition, social and personal values were expected to reflect the equality of all people, regardless of sex or ethnic group. Personal attributes related to role modeling also implied a group of values such as self-respect, ambition, respect for authority, and individualism.

As a result of the content analysis it is apparent that the most consistently evident values in the programs are educational ones. The educational values were represented in virtually every scene in every program. A number of social values such as helpfulness, sensitivity to others,

honesty, and equality of sex were represented almost as frequently, and several personal values such as politeness, cleanliness, sociability, and assertiveness are often depicted by ThinkAbout characters. In over half of the scenes of the ThinkAbout programs, equality of race and respect for authority are communicated via the dramatic vignettes.

Other values like humor, patience, and self-discipline were also often identified. While freedom and the value of property is communicated frequently in the programs, other values oriented to governmental concern such as justice, democracy, and patriotism are not emphasized. ThinkAbout characters tended to operate in a child world rather than in an adult world. Their chief contact with government was via the police; the value most frequently communicated in those situations was helpfulness.

The role-modeling issues in ThinkAbout were a complicated production issue. The necessity to provide dramatically interesting plots can easily lead to programs which include conflict or other forms of negative role modeling. The major role models examined were the ThinkAbout student-role model, teacher models, and sex and ethnic and age-role models.

The series met the student-role model expectations. ThinkAbouters were thoughtful, deliberate, and rational. Both sexes and minority as well as white characters, were able to make realistic self-assessments and employ ThinkAbout goal-related behaviors such as systematic reasoning and persistence in problem-solving. Both males and females were able to think confidently and consider alternatives.

The teacher-role model was not limited to the rather biased view of a white middle-class female schoolteacher. The teaching in the ThinkAbout programs was frequently given to target-aged characters. Many of the adult

teachers were not cast as classroom teachers. More often they were cast as parents, adult friends, etc. The teaching group was well balanced in terms of sex and ethnic representation.

Across all ThinkAbout major characters, sex-role bias virtually did not occur in the behaviors analyzed. Active reversing of bias occurred in that females were shown in significantly more non-traditional activities than one would expect on the basis of a random distribution of activities. Females were shown in active, leadership roles as well as in positions of being passive or following the lead of someone else. Similarly, males were shown in leadership and follower roles. Vigorous physical activity was not limited to ThinkAbout male characters. In the area of personal behaviors, both males and females gave aid to other people and sought aid from other people. Across many behaviors, the value placed on equality of sex was evident.

The sensitivity of the ThinkAbout project to representing ethnic/minority groups in a positive manner led to an over-representation of minority groups in a number of behavioral categories. For example, minority characters were over-represented in being judged active, cooperative, and in having leadership qualities. Activities generally considered somewhat negative such as inactivity/passivity or competitiveness were balanced across white and minority groups.

Aggressive behaviors and bias towards other groups occurred very infrequently in ThinkAbout programs in contrast to commercial television fare. Incidents of aggression were so few that they were statistically balanced even though no minority females were represented in any of the aggression categories. With respect to characters showing bias or lack of

respect towards another character, the incident was frequently resolved within the context of the program.

Age group bias frequently encountered in other television programming is that senior citizens are passive while young adults are the active members of television society. The ThinkAbout series did not follow typical television programming in that regard. Both adults and senior citizens were shown to be active, capable individuals. In very active physical behaviors, however, target-agers and teenagers were found significantly more often than either adults or senior citizens.

The ThinkAbout series presented sex and ethnic role-models which were positive without seeming sterilized. While the ThinkAbout world included primarily pro-social behaviors, incidents of aggression or lack of respect which were part of the dramatic plot were most often resolved within the context of that program. ThinkAbout was able to develop instructional television programming which would hold youngsters' attention without resorting to negative-role modeling or biased depictions of particular societal groups. The realistic life situations in which the target-aged characters encountered their challenges provided ample opportunity for both the demonstration of ThinkAbout problem-solving skills and pro-social behavior.

One implication of this work is that content analysis can be a viable formative evaluation tool in television projects. The focus of content analysis varies from typical evaluation techniques. For example, while typical formative might attempt to discern the appeal and comprehension of educational content of an educational program, content analysis speaks to content issues seldom considered directly by other evaluation techniques. In the case of ThinkAbout, the role modeling and balance issues extended

the scope of formative evaluation beyond the traditional appeal and comprehension data. Content analysis is also useful because its categories can be tailored to various needs and altered from the production of one series to the next.

This research clearly shows that formative content analysis techniques can be adapted to feed information into the production process as well as provide a summation or a final profile of an entire series. The relationship of formative evaluation to production has not always been an easy one. Content analysis, too, has been criticized when done after a project is finished. To production personnel, the information is of no use after the product is completed. The ThinkAbout adaptation of content analysis allowed issues of extreme importance to production people to be communicated at an appropriate time. Shifts could be made to insure meeting project goals.

Furthermore, this content analysis, unlike other formative evaluation techniques, maintained a series perspective. That is, information was fed forward to future programs rather than concentrating on a single program unit. The series perspective insures balance and representation, positive role modeling, and pro-social content across an entire series of programs. The cumulative nature of reporting the data builds across the production process to allow a final statement of the success or failure to meet intended goals on the part of the project personnel.

With respect to the field of content analysis, this research extended the technique in a useful way. Content analysis has frequently been used to criticize television products and find limitations. The present analysis provided a constructive course for improving the project during its development. The outcome for the ThinkAbout project was the production of sixty

instructional programs in which the intentions of the design were indeed carried out by the production staff. The efforts of the ThinkAbout consortium, AIT project staff, consultants, teacher reviewers and students resulted in a series which met its prosocial expectations. And, the Think-About content analysis allows that statement to be made.

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